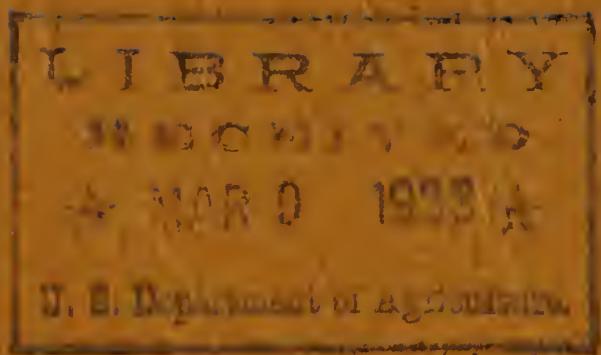


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OLDS & WHIPPLE INC. SEEDS AND FERTILIZERS HARTFORD, CONN.

1933

VEGETABLE
SEED TRIALS
HORTICULTURE
MAR 6 1933



SEED, FERTILIZER

AND

AGRICULTURAL IMPLEMENT CATALOG

for 1933

ALL PRICES SUBJECT TO CHANGE

WITHOUT NOTICE



FERTILIZER FACTORY:
Tolland Street, East Hartford, Conn.

MAIN OFFICE AND IMPLEMENT WAREHOUSE:
164-6-8 State St., Hartford, Conn.

OLDS & WHIPPLE, Inc.



Offices and Agricultural Warerooms at 168 State Street, Hartford, Conn.

Below is our Fertilizer Factory located on Tolland Street, East Hartford, Conn.



Foreword

For 1933 we offer fertilizer and fertilizer materials at the lowest prices that have prevailed for a great many years.

Every economy in manufacture and distribution, consistent with sound management, has been practiced that we might be able to place fertilizers, seeds and farm equipment in the hands of our customers at the lowest possible prices, fully realizing that the farmer has been obliged to sell his product at the lowest prices that have prevailed in many years.

The past three years have been an acid test to the manufacturers and distributors of our country and the temptation to make inferior goods to meet price competition has been great. We have not in the past, and shall not in the future, lower our standards of excellence, but continue to make and sell reliable goods at a price as low as is consistent with quality.

We wish to express our appreciation to our customers for their patronage during the past year and we shall endeavor to so conduct our business that we may be worthy of that patronage in the future.

OLDS & WHIPPLE, INC.

Olds & Whipple, Inc.

List of Fertilizers and Raw Materials For 1933

O. & W.'s SPECIAL FERTILIZERS

Complete Tobacco Fertilizer
Blue Label Tobacco Fertilizer
High Grade Tobacco Starter
High Grade Tobacco Starter
and Potash Compound
Top Dressing and Grass Fer-
tilizer.
Complete Market Garden Fer-
tilizer.

High Grade Potato and Vege-
table Fertilizer
Potato and General Purpose
Fertilizer
Double Strength Fertilizer
Corn Special Fertilizer
Lawn Fertilizer

WILCOX FORMULA

Corn Special Fertilizer
Potato and General Purpose

Market Garden Fertilizer
Top Dresser

FERTILIZING MATERIALS

Swift Sure Phosphate.
Swift Sure Bone Meal.
High Grade C. S. Meal guaranteed
analysis.
Castor Pomace guaranteed analysis.
Tobacco stems in bales.
High Grade Muriate Potash.
High Grade Sulphate Potash.
Nitrate of Potash.
Carbonate of Potash.

Super Phosphate. (acid phosphate)
Sulphate of Ammonia.
Nitrate of Soda.
Sheep Manure.
Dry Ground Fish.
Tankage.
Steamed Bone.
Precipitated Bone Phosphate.
Lime for Agricultural use.
Fine ground Nova Scotia Plaster.

We would call especial attention to our O. & W. Potato and General Purpose 4-8-7 made with a large proportion of the nitrogen derived from organic sources. We believe for potatoes and such crops as require the entire growing season to arrive at maturity, this organic form of nitrogen is very essential as it does not leach away with moisture, but carries through and matures the crop. Organic forms of nitrogen cost more but their use is justified if the yield can be increased.

We again urge our customers to order their fertilizer at once and allow us to deliver same at an early date and thus avoid the mad scramble that always comes late in the season. There is no good reason for delay.

Our Special Mixtures for all Crops

The following pages give you a list of the special fertilizers which we manufacture at our own factory.

These special mixtures are from tested formulae, proved out by practical growing tests. They are finely ground, and mechanically, in such condition, as to render them readily available to the growing crops.

Their use will repay you. They produce the kind of crops that pay. Used and endorsed by best growers.

Fertilizing Cigar Leaf Tobacco

for Bigger Yields and Better Burning Quality

A good cigar depends upon its burning quality and flavor for its reputation.

Leaf tobacco for making a good cigar must be of the best quality, must hold fire well, not burn too fast or too slowly. It must not coal on the cigar and it must leave a clear white or light gray ash, not a muddy ash.

Cigar smokers everywhere are complaining about the quality of the cigar being made today. Manufacturers cannot make good cigars unless they get good tobacco, and that is where the grower comes in.

Leaf-Wise

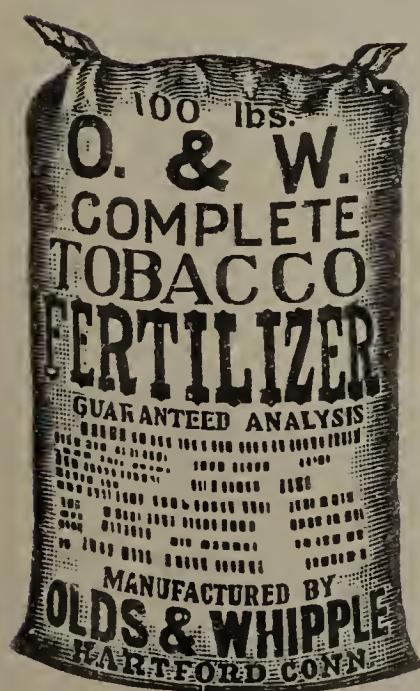
No matter how old a man is, if he is wise, he can still acquire more wisdom. No matter how old a grower is, he can still acquire more wisdom about a tobacco leaf.

The tobacco plant, perhaps more than any other plant, can be and is influenced for better or worse by proper or improper fertilization. In applying fertilizer, the grower must have two essential things in mind: 1, to preserve the productiveness of his soil; and 2, to produce leaf that has the most desirable qualities, namely, BURN — GRAIN — TEXTURE — and COLOR. This is a large order, but it can be successfully met by growers carefully studying the right fertilizers to use.

O. & W. Tobacco Fertilizer

To growers who desire a concentrated mixture, we offer this formula made along similar lines as our "Complete" Tobacco.

GUARANTEED ANALYSIS $\left\{ \begin{array}{l} 7\% \text{ Nitrogen} \\ 3\% \text{ Available Phosphoric Acid} \\ 7\% \text{ Actual Potash} \end{array} \right.$



O. & W. Complete Tobacco Fertilizer

Thousands of tons of this formula are used up and down the Connecticut Valley, proved to be the best by years of experience. While we make many special formulae to suit the ideas of our customers, O. & W. COMPLETE leads them all in popularity. This formula is the result of years of experimenting on our own farms and is endorsed by buyers of the leaf which is the strongest kind of recommendation.

GUARANTEED ANALYSIS $\left\{ \begin{array}{l} 5\% \text{ Nitrogen} \\ 3\% \text{ Available Phosphoric Acid} \\ 5\% \text{ Actual Potash} \end{array} \right.$

Our Blue Label Brand Tobacco Fertilizer

This fertilizer carries 1000 lbs. of C. S. Meal in every ton, put up for the grower who desires a large amount of meal under his tobacco crop. The phosphoric acid and potash are derived from the same high grade sources as our Complete Tobacco Fertilizer.

GUARANTEED ANALYSIS $\left\{ \begin{array}{l} 6\% \text{ Nitrogen} \\ 3\% \text{ Available Phosphoric Acid} \\ 6\% \text{ Actual Potash} \end{array} \right.$

O. & W. High-Grade Tobacco Starter

This high grade starter has been used with conspicuous success by some of our best growers in the valley. We recommend that it be applied after the first time hoeing. At that critical stage of growth an abundant supply of quickly available nitrogen enables the plant to get a vigorous start, overcome and grow away from any unfavorable condition that may exist.

Experience has taught us that the crop that grows quickly, vigorously and does not stop until it reaches maturity produces the best goods.

Apply about 500 lbs. per acre.

GUARANTEED ANALYSIS $\begin{cases} 10\% \text{ Nitrogen.} \\ 3\% \text{ Available Phosphoric Acid.} \end{cases}$

O. & W. High Grade Tobacco Starter and Potash Compound

This formula with 5 per cent quickly soluble nitrogen and 15 per cent actual Potash should be used with C. S. Meal or Castor Pomace in growing the tobacco crop and when so used makes a complete fertilizer. The Nitrogen of C. S. Meal or Pomace is slow acting and on most lands a more quickly soluble form of Nitrogen is needed to start the crop. We recommend using 1000 to 1500 lbs. per acre with a ton of C. S. Meal or Pomace.

GUARANTEED ANALYSIS $\begin{cases} 5\% \text{ Nitrogen.} \\ 4\% \text{ Available Phosphoric Acid.} \\ 15\% \text{ Actual Potash.} \end{cases}$

O. & W. Special Corn Fertilizer

This formula has been tested and tried in the cornfields of Connecticut and Rhode Island and produced excellent crops. It carries a high percentage of available phosphoric acid, necessary to promote hard grain and early maturity. It is also extensively used in market gardening.

GUARANTEED ANALYSIS $\begin{cases} 3\% \text{ Nitrogen.} \\ 10\% \text{ Available Phosphoric Acid.} \\ 4\% \text{ Actual Potash.} \end{cases}$

O. & W. Complete Market Garden Fertilizer

This is one of our high grade special mixtures for use on Corn, Potato, Onion Crops, Market Garden and general purpose fertilizer.

The sources of plant food are such as are exceedingly available to the plant and best suited to promoting rapid and vigorous growth. Tested at our own farms we are able to speak authoritatively as to its merits. All growers will be repaid by using this special mixture on their Crop.

Our soils are well adapted to the culture of these Crops and to make them profitable as well, is an easy matter if the culture is supplemented and promoted by the use of our special fertilizer.

GUARANTEED ANALYSIS $\begin{cases} 4\% \text{ Nitrogen.} \\ 8\% \text{ Available Phosphoric Acid.} \\ 4\% \text{ Actual Potash.} \end{cases}$

O. & W. Top Dressing and Grass Fertilizer

A complete fertilizer with all the essential elements for rapid and luxuriant growth, carrying both soluble salts and organic material, it is suitable both for top dressing or permanent seeding down mixture.

GUARANTEED ANALYSIS { 8% Nitrogen.
6% Available Phosphoric Acid.
6% Actual Potash.

O. & W. High Grade Potato and Vegetable Fertilizer

This is a concentrated mixture running high in analysis in every ingredient, and as a formula, is extensively used in the potato growing sections of Maine. To produce large crops of potatoes you must feed heavily of Potash. This was thoroughly proven during the war, as even when Potash was extremely high and scarce some of the Maine potato growers paid the price for this ingredient and were well repaid by increased crop.

GUARANTEED ANALYSIS { 5% Nitrogen.
8% Available Phosphoric Acid.
7% Actual Potash.

O. & W. Potato and General Purpose Fertilizer

This formula should be used in growing potatoes. The 4% Nitrogen content makes it practically the same as our 5-(ammonia) 8-7 of previous years and most agronomists agree that this is a proper balance for the potato crop. This formula is also extensively used in market gardening.

GUARANTEED ANALYSIS { 4% Nitrogen.
8% Available Phosphoric Acid.
7% Actual Potash

O. & W. Potato and General Purpose Organic 4-8-7

This formula has a large proportion of the nitrogen derived from organic sources. We believe for potatoes and such crops as require the entire growing season to arrive at maturity, this organic form of nitrogen is very essential as it does not leach away with moisture but decomposes freeing the nitrogen slowly, carrying through and maturing the crop. If we can increase the yield, the slight extra cost is more than justified.

O. & W. Double Strength Fertilizer

A highly concentrated formula used principally in growing potatoes. Should be used at the rate of 1,000 to 1,200 lbs. per acre, being very careful that fertilizer does not come in contact with seed.

GUARANTEED ANALYSIS { 8% Nitrogen.
16% Available Phosphoric Acid.
14% Actual Potash.

We are now mixing Wilcox formulae, having 3 years ago purchased the mixed fertilizer business of the Wilcox Fertilizer Co., of Mystic, Conn. Wilcox fertilizers have always enjoyed a good reputation. It is our aim to maintain and enhance this reputation, making only such changes as recent scientific research has proved advantageous.

We offer the following Wilcox formulae:

Wilcox Corn Special

This is an old favorite, moderate in price, made of soluble materials, and producing fine crops.

GUARANTEED ANALYSIS $\left\{ \begin{array}{l} 3\% \text{ Nitrogen.} \\ 10\% \text{ Available Phosphoric Acid.} \\ 4\% \text{ Actual Potash.} \end{array} \right.$

Wilcox Market Garden

This formula is deservedly popular in the great market garden section on Newport Island, Eastern Connecticut, Massachusetts and surrounding territory. Produces quick luxuriant growth and early maturity of vegetables.

GUARANTEED ANALYSIS $\left\{ \begin{array}{l} 4\% \text{ Nitrogen.} \\ 8\% \text{ Available Phosphoric Acid.} \\ 4\% \text{ Actual Potash.} \end{array} \right.$

Wilcox Potato and General Purpose Fertilizer

Used extensively in growing potatoes and market garden truck, carrying a high percentage of potash needed in many crops.

GUARANTEED ANALYSIS $\left\{ \begin{array}{l} 4\% \text{ Nitrogen.} \\ 8\% \text{ Available Phosphoric Acid.} \\ 7\% \text{ Actual Potash.} \end{array} \right.$

Wilcox Top Dresser

A standard mixture made of soluble materials for application to grass lands, used either as top dressing or seeding down.

GUARANTEED ANALYSIS $\left\{ \begin{array}{l} 8\% \text{ Nitrogen.} \\ 6\% \text{ Available Phosphoric Acid.} \\ 6\% \text{ Actual Potash.} \end{array} \right.$

DESCRIPTIVE CATALOGUE and PRICE LIST
OF
Garden and Farm Seeds,
Agricultural Implements and
Fertilizers
for 1933

Important Notice—Free Delivery of Seeds

We Deliver, Transportation Paid in the U. S. and Possessions, Vegetable Seeds by the packet, ounce, quarter-pound, pound.

On larger quantities purchaser pays transportation. We also deliver, transportation paid, all Lawn Grass Seed mixtures in any quantity.

In making this Free Delivery offer we reserve the right to ship goods either by Parcel Post, Express or Freight.

We reserve the right to advance prices without notice should current conditions require it.

REMITTANCES

May be made by Express Money Order, P. O. Money Order or Check.

NOTE:—If cash or stamps are sent by mail, REGISTER THE LETTER, otherwise it travels at owner's risk.

C. O. D. ORDERS

If goods are wanted C. O. D., 25 per cent of the amount must accompany the order. Charges for returning the money will be collected on delivery.

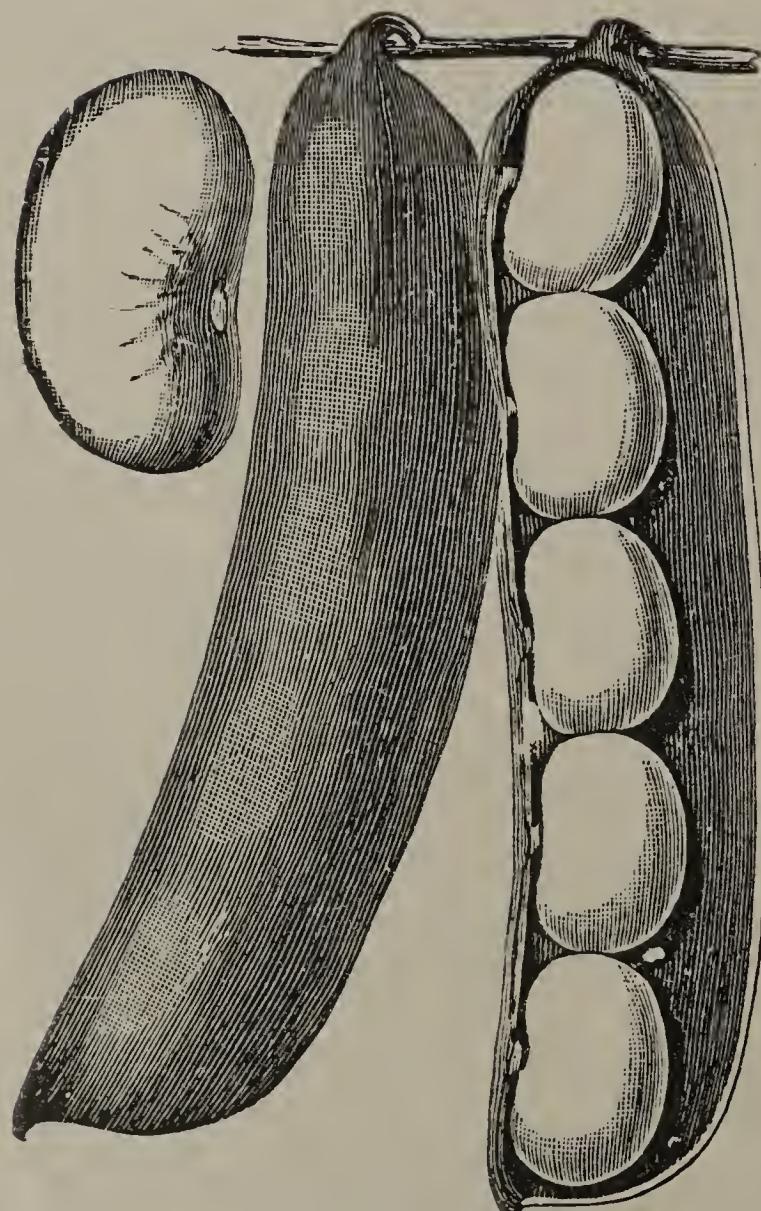
In accordance with the universal custom of the Seed Trade, Olds & Whipple, Inc. give no warranty, express or implied, as to description, quality, productiveness, or any other matter, of any Seeds they send out, and they will not be in any way responsible for the crop.

ASPARAGUS

An Asparagus bed may be made from one or two year old roots, planted in fall or spring. Plant the roots in rows four feet apart, leaving about twelve inches between plants in the row. Should be planted in trenches and gradually filled in as plants grow. Seeds may be sown in April in drills one foot apart and one inch deep. One ounce of seed will sow sixty feet of drill.

	Per Pkt.	Per $\frac{1}{4}$ lb.	Per 1b.
Mary Washington (seed)	\$0.15 \$0.30 \$1.00
Mary Washington roots	1.50 per 100

BEANS—Dwarf or Bush



Burpee's Bush Lima.

To produce a regular succession of crops through the season, plant every two weeks, from about beginning of May to end of summer. Plant in rows 18 inches apart, two inches deep; cultivate only when soil is dry, as the scattering of earth on vines will cause them to rust. One quart will plant 100 feet of drill and one and one-half bushels for one acre.

While we exercise the greatest care to have all seeds pure and reliable, we do not give any warranty, express or implied, and will not be in any way responsible for the crop.

Burpee's Bush Lima.—A true bush form and immense cropper,

Per lb.	5 lb. lot 15 to 100 lb.	Per lb.	Per lb.
..	..	\$0.35	\$0.27 \$0.25

Fordhook Bush Lima.—

..40	.35	.32
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	Per lb.	5 lb. lot Per lb.	15 to 100 lb. Per lb.
Improved Rust Proof, Golden Wax. —Early, long, round, stringless pods,	\$0.25	\$0.20	\$0.15
Black Wax, Pencil Pod. —Very early, round thick pods, . . . . .	.25	.20	.15
Wardwell's Kidney Wax. —Early, flat long wax pods, . . . . .	.30	.25	.18
Black Valentine. —Stringless, long round green pod . . . . .	.30	.25	.17
Bountiful. —Flat Green pods, best stringless, . . . . .	.25	.20	.15
Burpee's Stringless. —Round Green pod early, . . . . .	.25	.20	.15
Tendergreen. —New stringless, green pod . . . . .	.35	.25	.20
Horticultural Dwarf. —Green pod, a superior shell bean, medium early, . . . . .	.27	.22	.17
French Dwarf Horticultural. —Pod 6 to 7 in. very attractive . . . . .	.30	.23	.18
Low's Champion. —Large green flat stringless pods, . . . . .	.30	.22	.17
White Kidney. —An excellent shell bean and for baking, green pod, . . . . .	.25	.20	.15
White Marrow. —A fine winter bean, . . . . .	.25	.20	.15
Red Kidney. —An excellent shell bean, similar to White Kidney, . . . . .	.25	.20	.15

BEANS—Pole

Plant in hills three to four feet apart, putting four or five beans in a hill, and leaving space in the center for the pole. One quart of limas will plant 100 hills. One quart of the smaller seeded sorts will plant about 200 hills.

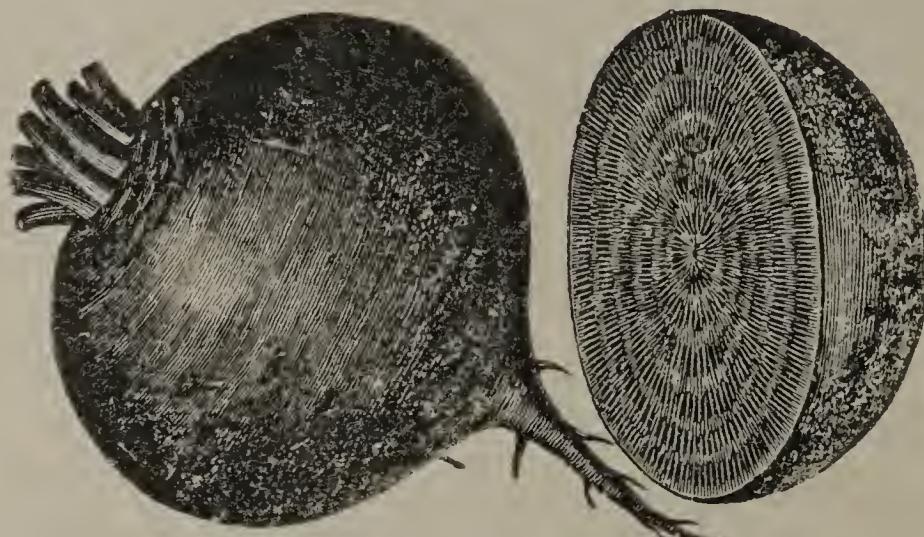
	Per lb.	5 lb. lot Per lb.	15 to 100 lb. Per lb.
Extra Leviathan Lima. —An early and large variety,	\$0.35	\$0.27	\$0.20
Lima, Large White. —An old and choice variety, . . . . .	.35	.27	.20
Lima, King of the Garden. —Large and extremely productive, . . . . .	.35	.27	.20
Horticultural Cranberry. —Excellent quality, . . . . .	.30	.27	.20
Italian Horticultural. —Long pod, bright color. . . . .	.35	.30	.25
Worcester or King Horticultural . . . . .	.35	.32	.25
Kentucky Wonder. —Green pod, very prolific, . . . . .	.25	.20	.18
Kentucky Wonder. —Wax or yellow podded, very prolific, . . . . .	.30	.23	.20

BEETS—Table Varieties

Sow from April to beginning of July, in drills about one foot apart, covering seeds about one inch. Thin the young plants when suitable size for greens to six or eight inches apart. One ounce sows 50 feet of drill, 5 to 6 pounds to one acre.

Quantity discount, 10 lbs. or more, .10 lb.	Per pkt.	Per oz.	Per lb.
Early Wonder. —Deep red, round, very popular with market gardeners,	\$.05	\$.10	\$.80
Crosby's Egyptian. —Early smooth and fine quality, . . . . .	.05	.10	.70
Edman's Extra Early. —One of the best, . . . . .	.05	.10	.70

		Per pkt.	Per oz.	Per lb.
Early Eclipse. —Very early, dark red color, . . . . .		.05	.10	.70
Early Egyptian. —Good color, a smooth turnip beet, . . . . .		.05	.10	.70
Detroit Dark Red. —Smooth, bright red, good keeper, . . . . .		.05	.10	.80



Dewing's Early Blood Turnip.

Dewing's Early Blood Turnip. —A standard variety of excellent quality, . . . . .	.05	.10	.75
Long Smooth Blood. —An excellent late variety for winter use, . . . . .	.05	.10	.90
Swiss Chard. —Fine for greens, cultivated solely for leaves, . . . . .	.05	.10	.90

MANGOLD WURZEL

Sow in May or June in rows, 18 inches to 2 feet apart, and thin to 8 inches in the row. The value of these for stock feeding cannot be over estimated. Sow 6 to 8 pounds to one acre.

Quantity discount. 5 lbs. or more. .10 lb.	Per oz.	Per $\frac{1}{4}$ lb	Per lb.
Carter's Mammoth Long Red. —A heavy cropper, one of the best, . . . . .	.10	.20	.50
Norbiton Giant Long Red. —Very productive, . . . . .	.10	.20	.50
Yellow Globe. —Large globular formed roots, good for shallow soils, . . . . .	.10	.20	.50
Giant Half Sugar. —Rose shape and similar to Norbiton Giant, .10	.20	.50	
Golden Tankard. —A half-long variety of bright yellow color, . . . . .	.10	.20	.50
White Sugar, Lane's Improved. —A well known variety, . . . . .	.10	.20	.50

BROCCOLI

A vegetable resembling Cauliflower but much hardier. Requires the same general culture as cabbage. One ounce of seed produces about 1,500 plants.

	Per pkt.	Per oz.
Purple Cape. —Medium size heads, hardy, . . . . .	.20	.65
White Cape. —Like Purple Cape, but of cream white color, . . . . .	.20	.65
Early Green Italian — or Calabrese, . . . . .	.20	.75
Italian Broccoli Rape or Senaps for bunching, . . . . .	.10	.25

BRUSSELS SPROUTS

A species of cabbage family and cultivated in about same manner. One ounce of seed will produce about 1,200 plants.

	Per pkt.	Per oz.
O. & W.'S Best	\$0.10	\$0.35

CABBAGE—Early



All Seasons.

All the Cabbage family require rich, deep, well-drained soil. For the early kinds, plant in rows 30 inches apart and 16 inches between the plants. For the late varieties, three feet between the rows and two feet between the plants. For very early use, sow in January or February in hot-beds. Set out when plants are strong enough into other hot-beds or set in cold frames in March. Transplant when danger from frost is past to open ground. The late, or winter crop seed can be sown in May and the plants set out when large enough.

To destroy the green worm that attacks the cabbage plant, use a solution of one ounce of saltpetre in three gallons of water. One ounce of seed will produce about 3,000 plants, one-quarter pound for one acre.

	Per pkt.	Per oz.	Per 1b.
Golden Acre.—Extra early Copenhagen type,	\$0.10	\$0.30	\$3.75
Copenhagen Market.—Extra early round hard head, . . . . .	.05	.25	2.75
Early Jersey Wakefield.—A fine, very early medium sized market favorite, . . . . .	.05	.25	2.75
Early Summer.—A superior, second early, heads large and solid, . . . . .	.05	.25	2.75
Early Flat Dutch.—A fine early variety for family use, . . . . .	.05	.25	2.75
All Seasons.—Medium early, very large and sure header, . . . . .	.05	.25	2.75

CABBAGE—Late Varieties

Per pkt. Per oz. Per lb.

O. & W. Premium Flat Dutch.—An extra fine selection of the large late Flat Dutch,	\$0.05	\$0.25	\$2.75
Improved American Drumhead Savoy.—Large, fine quality, excellent winter cabbage, . . . . .	.05	.25	3.00
Stone Mason Drumhead.—A large round solid variety, . . . . .	.05	.25	2.75
Red Dutch Drumhead.—Fine solid dark red heads, . . . . .	.05	.25	2.75
Hollander, or Danish.—A superior winter variety, heads round, very hard, fine and tender, . . . . .	.05	.25	2.75
Sure Head.—Large growing, fine heading, solid and large, . . . . .	.05	.25	2.75
Chinese.—Select strain, . . . . .	.10	.30	4.00
Chinese Chihili.—Long slender, . . . . .	.10	.30	4.00



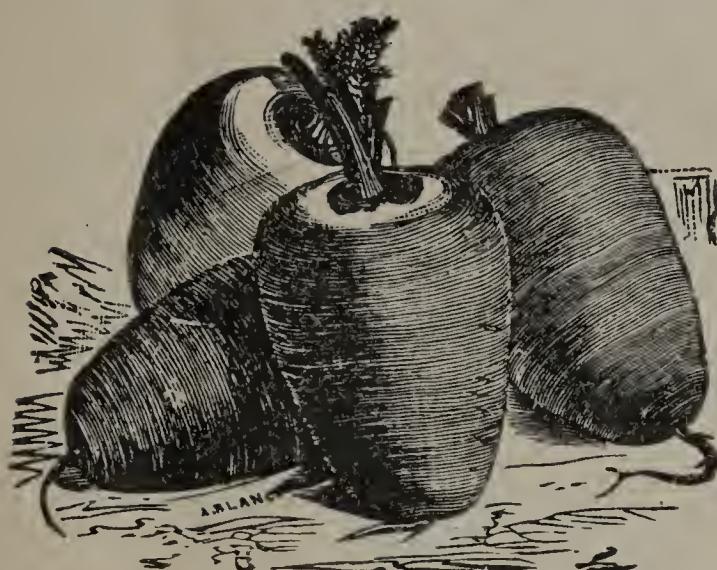
Paris Golden.

CELERY

Sow seed about the first of April in hot-bed or cold frame. Transplant four inches apart, when three inches high in rich soil; water and protect until well rooted, then transplant into rows 5 or 6 feet apart either on surface or in trenches 8 inches deep. Set the plants 10 or 12 inches apart. To blanch draw earth around the plants from time to time.

One ounce of seed will give about 4,000 plants.

	Per pkt.	Per oz.	Per lb.
Paris Golden, Self Blanching, (French.)—An early golden variety, very popular,	\$0.20	\$0.75	\$10.00
Boston Market.—One of the best varieties in cultivation, . . . . .	.10	.25	3.00
Celeriac.—Turnip rooted, used for salads and soups, . . . . .	.10	.25	3.00
White Plume.—Easily bleached, usually solid and of a pleasing nutty flavor, . . . . .	.10	.30	3.00
Golden Plume.—Popular Golden self-blanching, . . . . .	.40	1.00	10.00
Winter Queen.—One of the best winter varieties, . . . . .	.10	.25	3.00
Giant Pascal.—Second, early crisp, fine quality, . . . . .	.10	.25	3.00
Easy Blanching.—White, solid, easily bleached, . . . . .	.15	.35	4.00



CARROT

Carrots thrive best in rather light loam; soil should be well cultivated and well fertilized. Plant in rows 14 inches apart, and thin plants to 3 to 5 inches in the rows. Plant from the middle of April to the middle of May.

One ounce will sow 100 feet of drill, 3 to 4 pounds to one acre.

Quantity discount. 5 lbs or more. .10 lb.

Per pkt. Per oz. Per lb.

Early Half Long Nantes. —Stump-rooted, coreless, red color,	\$ 0.05	\$0.15	\$1.00
Chantenay. —A half-long, one of the finest for table use, . . . . .	.05	.15	1.00
Danvers Half Long. —A most desirable variety, great keeper, . . . . .	.05	.15	1.00
Hutchinson. —Large stump rooted, selected stock, . . . . .	.05	.25	2.25
Improved Long Orange. —A large long rooted variety, for stock purposes, . . . . .	.05	.15	.90
White Belgian. —Large, white, productive, for stock, . . . . .	.05	.15	.75

CAULIFLOWER

Is one of the most delicious varieties of the Cabbage family. Requires a rich deep soil, a low moist situation being desirable. Plants should be set in rows about 2 feet apart and 18 inches between the plants.

One ounce will sow a bed of 40 square feet and produce about 2,000 plants.

	Per pkt.	Per $\frac{1}{4}$ oz.	Per oz.
Early Snowball. —This ranks extremely high among the early varieties, it is a reliable header of good size and of rich white color,	\$0.20	\$0.50	\$1.50
Erfurt Early Dwarf. —A good variety, . . . . .	.20	.50	1.50
Early Paris. —A standard early variety, . . . . .	.15	.50	1.25
Danish Giant or Dry Weather. —A large second early variety, . . . . .	.20	.50	1.60

CORN—Field

West Branch Sweepstakes.—Big-eared Dent, a popular ensilage variety

Eureka.—A well known ensilage variety of White Corn. Very leafy, of extra large growth, and we believe will produce more tons of silage than any other variety. For Ensilage only,

Leaming's Early Dent.—A very popular Dent Corn, grown for both grain and Ensilage. This variety will mature in this latitude,

Early Yellow Dent.—Connecticut grown, a dent corn that will mature in this latitude,

Longfellow.—Yellow flint corn, a well and favorably known variety, large long ears

Improved 8 Row Yellow Flint.—Earlier than Longfellow

} at market prices.

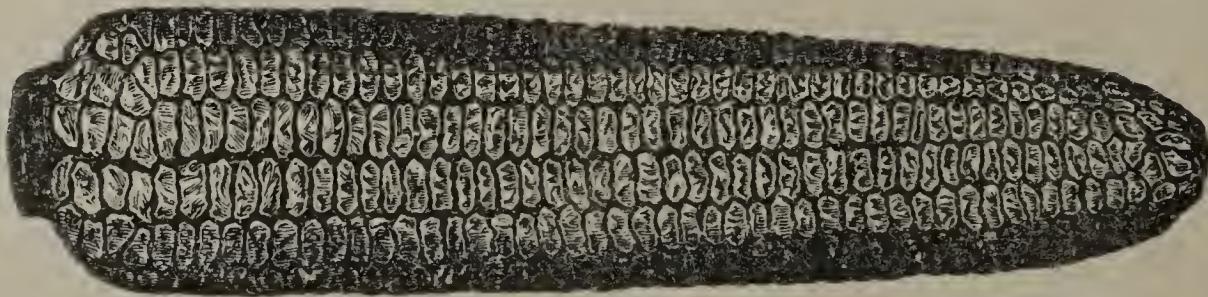
CORN—Sweet

Requires a rich warm soil. For early varieties plant when ground has become well warmed; successive plantings may be continued until July. Plant in hills from 3 to 3½ feet apart, according to the height of variety.

One quart will plant 200 hills; 8 quarts for one acre in hills.

Per lb.	5 lb. lot	15 to 100 lb.
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Extra Early Golden —10 days earlier than Golden Bantam, best extra early yellow,	\$0.25	\$0.22	\$0.16
Golden Sunshine .—Week earlier than Golden Bantam, . . . . .	.25	.22	.16
Columbia .—Earliest white variety, . . . . .	.25	.22	.16
Whipple's Yellow .—Early as golden bantam but much larger, fine quality, . . . . .	.25	.22	.15
Whipple's White .—Early and good quality, . . . . .	.25	.22	.15
Golden Bantam .—A yellow sweet corn, extra early and extra hardy, very tender and sweet. . . . .	.25	.22	.16
Golden Giant .—Cross between Golden Bantam and Howling Mob, . . . . .	.28	.22	.15



Whipple's Yellow.

Crosby's Early .—An old favorite, early and of excellent quality, . . . . .	.25	.23	.16
Howling Mob .—Excellent quality early large ears, . . . . .	.25	.22	.15
New Champion .—Fine early quality with large ears, . . . . .	.25	.22	.15
Bantam Evergreen .—Yellow, medium early, large size, . . . . .	.25	.23	.16
Evergreen .—A standard late variety, . . . . .	.25	.22	.15
Long Island Beauty .—Large late and one of the best. . . . .	.25	.22	.15
Mammoth Sugar .—Extra large sweet variety, of good quality, . . . . .	.25	.22	.15
Black Mexican .—An early, tender corn of fine flavor, . . . . .	.35	.25	.20

Use O. & W. Complete Market Garden Fertilizer for Corn

CRESS

To be planted in drills and sown quite thickly, on good rich ground, in early spring.

One ounce of seed will plant 100 feet of drill.

Per pkt. Per oz. Per lb.

Curled .—	\$0.10	\$0.15	\$0.75
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CUCUMBER

First planting should be made in May when ground is dry and warm, in hills about 4 feet apart; thin out to 3 to 4 plants to the hill when established. For pickles plant during the last two weeks in June.

One ounce will plant 50 hills; two pounds for one acre.



Improved Early White Spine.

	Per pkt.	Per oz.	Per lb.
Early Cluster. —Bears in clusters, early and productive, .	\$0.05	\$0.15	\$1.00
Snow Pickling. —One of the best pickling, .	.05	.15	1.00
Green Prolific. —The very best pickling sort, .	.05	.15	1.00
Boston Pickling. —Produces an abundant crop of dark green color, .	.05	.15	1.00
Improved Early White Spine. —A standard variety of uniform good size and color, .	.05	.15	1.00
Early Fortune. —Excellent for slicing or Pickling, .	.05	.15	1.00
Davis Perfect. —Dark green, good length, popular, .	.05	.15	1.15
Longfellow Dark Green. —Largest slicing very attractive market sort .	.05	.20	1.75
Improved Long Green —A large and late variety, .	.05	.15	1.15

DANDELION

Sow in May in drills 12 inches apart, covering seeds about one-half inch deep. Cultivate to keep down weeds during summer and the following spring leaves will be suitable for cutting. Must be covered in winter to protect from frost.

One ounce for 100 feet of drill. One pound for one acre.

	Per pkt.	Per oz.	Per lb.
Improved Thick-Leaved. —Standard sort, very productive, \$0.15	\$0.45	\$5.00	
French Garden. — .	.10	.25	2.50

DILL

	Per pkt.	Per oz.	Per lb.
Mammoth or Long Island. — .	.05	.15	\$0.75

EGG PLANT

Plant the seed in hot beds early in spring. Transplant when two inches high into another bed, or small pots. Plant in garden when weather is settled and warm. Should be placed about 3 feet apart, and well watered for 2 or 3 days, until they show signs of being rooted.

	Per pkt.	Per oz.
New York Improved Purple. —The leading market variety, excellent and very productive. .	\$0.15	\$0.40
Black Beauty. —Early, fruit black, round and solid, .	.15	.40

ENDIVE

For early use, sow as soon as ground can be worked in spring in drills fifteen inches apart; thin plants to six inches in the row. Any ordinary soil will do, but a moist place is preferred. To blanch the leaves, gather them together when dry and tie with matting or cover with ordinary flower pots inverted.

One ounce will produce about 3000 plants.

	Per pkt.	Per oz.	Per lb.
Green Curled.—A standard sort,	\$0.05	\$0.15
Moss Curled.—Very ornamental,05	.15
Batavia Escarolle.—05	.15
			1.00

KALE or German Greens

Plant the larger varieties in hills two by three feet apart and thin to one plant to the hill. Requires deep, rich soil. Set out plants in June and treat in same manner as for cabbage.

One ounce will produce 2,000 plants.

	Per pkt.	Per oz.	Per lb.
Green Curled Scotch.—Leaves of bright green, very tender and closely curled,	\$0.10	\$0.15
German Greens.—To be sown in fall for spring use,10	.15
			.75

KOHL RABI

An intermediate vegetable between the cabbage and turnip. Prepare as for cabbage. Sow in April in rows 18 inches apart and thin out to 8 inches apart.

One ounce gives 3,000 plants.

	Per pkt.	Per oz.	Per lb.
Early White Vienna.—A standard early,	\$0.10	\$0.15
Early Purple Vienna.—Very large and productive,10	.15
			1.75

LEEK

Sow the seeds in April and transplant in July to rows 15 inches apart and 8 inches between plants.

One ounce will grow 1,000 plants.

	Per pkt.	Per oz.	Per lb.
American Flag.—A hardy and profitable sort, excellent for winter use,	\$0.10	\$0.20
			\$1.75

While we exercise the greatest care to have all seeds pure and reliable, we do not give any warranty, express or implied, and will not be in any way responsible for the crop.



Boston Market.

LETTUCE

Lettuce needs a rich and moist soil, should be sown in rows about 12 inches apart and the plants thinned to 10 inches apart for the heading varieties. When not grown for head they may be sown broadcast. The more rapid the growth, the better the quality.

One ounce for 3,000 plants.

May King.—Medium size, early, good heading, a popular sort,

Per pkt. \$0.05
Per oz. \$0.20
Per lb. \$1.50

Early Curled Silesia.—Sweet, early, good variety,

.05 .20 1.50

Early Simpson.—Early, compact mass of tender leaves,

.05 .20 1.50

Black-Seeded Simpson.—Large light-colored head variety,

.05 .20 1.50

Hanson.—Large, solid, crisp head, one of the best outdoor sorts,

.05 .20 1.50

True Iceberg.—Light green heads,

.05 .20 1.50

Tennis-Ball Black Seeded.—Excellent for early large heads,

.05 .20 1.50

Tomhannock.—One of the best varieties for broadcast cultivation, leaves slightly bronzed,

.05 .20 1.50

Crisp as Ice. (Bronzed) a fine bronze leaf lettuce,

.05 .20 1.50

New York Number 12.—Commonly called Iceberg.

.05 .25 2.00

Big Boston.—A head lettuce, for forcing or open culture,

.05 .20 1.50

White Boston.—Commonly called green leaved Big Boston

.05 .20 1.50

Cos or Romaine.—

.05 .20 1.50

MUSTARD

Sow from April to June in drills one foot apart and cover seed lightly. Used principally for salads.

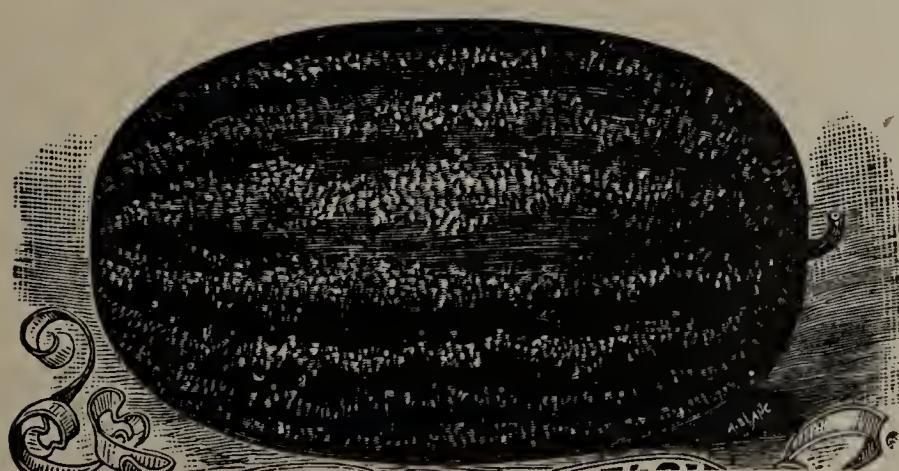
White or English.—For salad or medicinal purposes,

Per oz. \$0.10
Per 1/4 lb. \$0.20
Per lb. \$0.45

Brown.—More pungent than white,

.10 .25 .75

MELON—Water



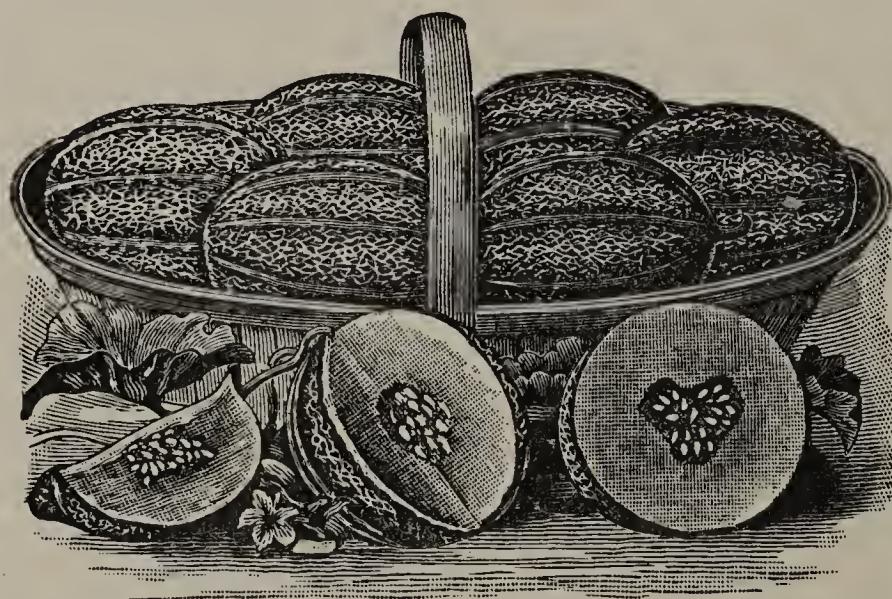
Ice Cream.

A warm light sandy loam preferred. Being tender should not be planted before middle of May. Plant in hills 5 to 6 feet apart each way for the musk varieties and 8 feet apart for the water. Cover seeds about one-half inch deep and when well started thin out to 3 plants in a hill. One ounce will plant about 15 hills; 4 pounds to the acre.

Cole's Early.—Round, striped, delicious flavor, red flesh, good size,

Per pkt. \$0.05
Per oz. \$0.15
Per lb. \$1.00

	Per pkt.	Per oz.	Per lb.
Kleckley's Sweet. —Oblong in form, dark green, thin rimmed, flesh bright scarlet, white seed, sweetest of all,	\$0.05	\$0.15	\$1.00
Mountain Sweet. —An old standard variety, early and solid, . . . . .	.05	.15	1.00
Phinney's Early. —Early, reliable, red fleshed, productive, . . . . .	.05	.15	1.00
Ice Cream. —White seeds, medium size, solid fine flavor, one of the most popular varieties grown, . . . . .	.05	.15	1.00
Kolb's Gem. —Flesh bright red, almost round, grows large, very choice, . . . . .	.05	.15	1.00
Citron for Preserves.— . . . . .	.05	.15	1.00



MELON—Musk

One ounce will plant 80 hills; 2 to 3 pounds for one acre.

While we exercise the greatest care to have all seeds pure and reliable, we do not give any warranty, express or implied, and will not be in any way responsible for the crop.

Rocky Ford Melon.

	Per pkt.	Per oz.	Per lb.
Honey Rock. —Round heavily netted thick salmon flesh	\$0.05	\$0.20	\$1.50
Hackensack. —Large, productive and good flavor, green fleshed,	\$0.05	\$0.15	\$1.25
Rocky Ford. —A very popular variety, flesh light green, sweet and delicate flavor, . . . . .	.05	.15	1.25
Bender's Surprise. —Large, slightly oval, good quality, pink flesh, . . . . .	.05	.15	1.20
Hearts of Gold. —Round medium early, pink flesh, . . . . .	.05	.15	1.25
Miller's Cream. —Thick meated and salmon colored flesh, delicious, . . . . .	.05	.15	1.25
Paul Rose. —An extra quality, salmon flesh, medium size,	.05	.15	1.25
Emerald Gem. —Small, but prolific, yellow meated, superior quality, . . . . .	.05	.15	1.25
"Lake Champlain." —Improved Emerald Gem, . . . . .	.05	.15	1.25
Osage, Salmon Fleshed. —A deliciously sweet melon of fine flavor, . . . . .	.05	.15	1.25

NASTURTIUM

Cultivated for both use and ornament. Young seeds may be used as capers and leaves for salad purposes. The beautiful flowers, blooming freely all summer add a charm to the garden and lawn. Plant in May.

	Per pkt.	Per oz.	Per $\frac{3}{4}$ lb.
Tall. —An ornamental climber,	\$0.05	\$0.15	\$0.35
Dwarf. —Fine for borders and beds, . . . . .	.05	.15	.35

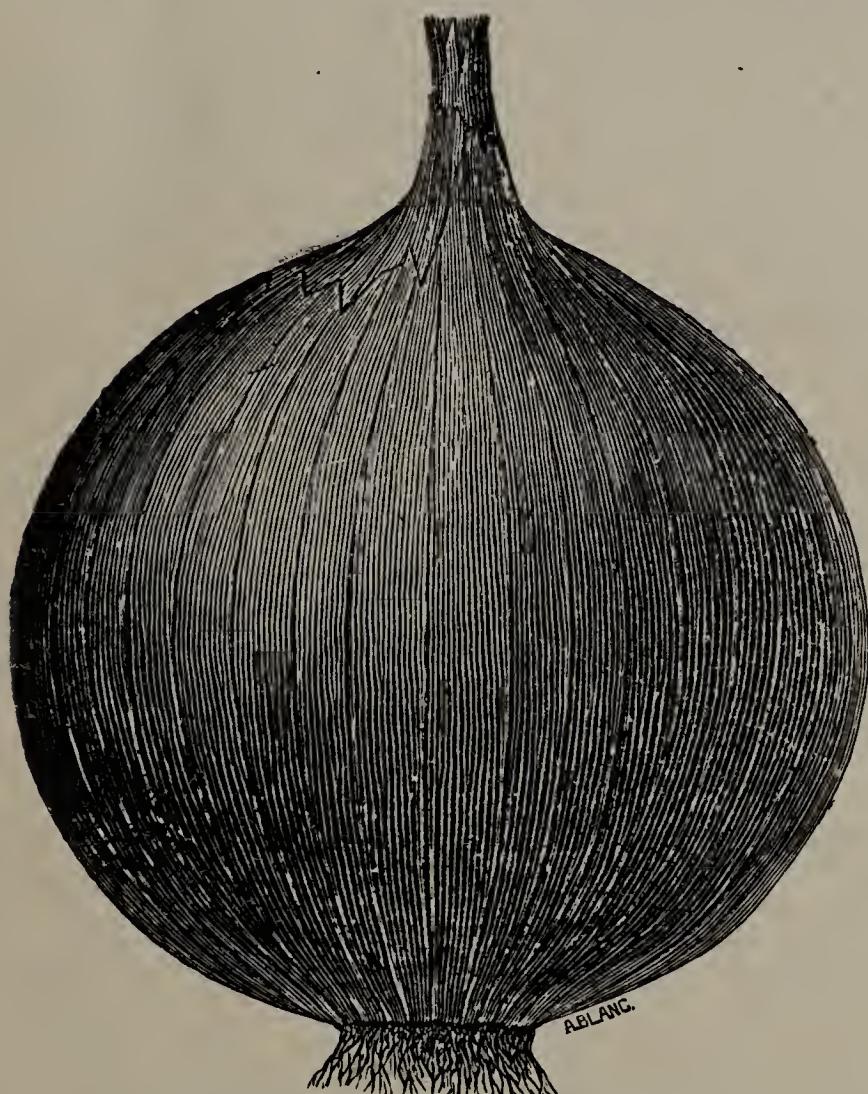
OKRA

Plant in rows 2 feet apart, thinning plants to 1 foot apart in the row.

	Per pkt.	Per oz.	Per lb.
Dwarf Green.—Early and productive.	\$0.10	\$0.15	\$0.50

ONION

(Strictly new seed—Prices subject to change.)



Southport Red Globe.

O. & W. Complete Market Garden Fertilizer.

A fertilizer that will produce remarkable crops. Used by many of the best growers in Massachusetts and Connecticut.

The onion thrives best in deep, loamy soil, well fertilized. Sow the seeds thinly in drills 1 foot apart. Cover seeds about $\frac{1}{4}$ inch, roll and tread soil down solidly. When 3 inches high, thin out to 3 inches apart. Cultivate well and keep out weeds.

One ounce seed will sow 100 feet of drill. Six pounds for one acre.

Per pkt. Per oz. Per lb.

Wethersfield Large Red.—A large yielder, excellent to keep, . . . . .	. . . . .	\$0.05	\$0.20	\$1.50
Southport Red Globe.—Finest large red sort, . . . . .	. . . . .	.10	.20	1.60
Southport Yellow Globe.—Handsome and late variety, . . . . .	. . . . .	.10	.20	1.50
Southport White Globe.—Early, mild flavored, large, not a good keeper, . . . . .	. . . . .	.10	.25	2.25
Yellow Globe Danvers.—One of the superior yellow globe varieties, . . . . .	. . . . .	.05	.20	1.50
White Portugal.—Excellent for pickling, should be sown thick, . . . . .	. . . . .	.10	.25	2.25
Prize Taker.—Yellow skin, white flesh, good cropper, large size, . . . . .	. . . . .	.10	.20	1.75
Japanese or Ebenezer.—(For growing sets), . . . . .	. . . . .	.10	.20	1.75

ONION SETS

Should be planted as early as the ground can be worked in rows 12 inches apart. Set each about 3 inches apart. When onions are grown from sets they can be used in the green state in June, or will ripen by July.

PARSLEY

Sow early in spring in drills 1 foot apart, covering lightly; thin out the plants to 3 to 4 inches apart; used for flavoring and garnishing. A single row forms a good edging for flower-beds or walks.

		Per pkt.	Per oz.	Per lb.
Moss Curled. —Very ornamental and productive, . . .	\$0.05	\$0.15	\$0.90	
Curled, or Doubled. —A most beautiful variety, moss-like leaves of handsome bright green color, . . .	.05	.15	.90
“Plain” Leaved. —(Not curled), . . . .	.05	.15	.85
Hamburg. —Turnip rooted, . . . .	.10	.15	.90

PARSNIP

Make the soil very fine and plant the seed very early, in rows eighteen inches apart, thinning plants to three or five inches in the rows; seeds should be covered about one-half inch deep.

Parsnips, aside from table use, have great value for stock-feeding purposes. Are improved by allowing to remain in open ground through the winter.

One ounce to 150 feet of drill; five pounds for one acre.

PEAS

The wrinkled varieties, while the sweetest of all peas, are more liable to rot, being tender, and need to be planted thicker and later than the round, hard sorts. Soil needs to be well manured. Have the dwarf varieties in rows two and one-half feet apart; those kinds growing two to three feet high, in rows three feet apart, and the tallest in rows four feet apart. The smooth varieties may be sown as soon as ground can be worked; the wrinkled sorts when soil is well warmed.

One quart to 100 feet of drill; one and one-half bushels to an acre.



Carter's Premium Gem.

East Hartford Extra Early.—True stock. $2\frac{1}{2}$ feet, best early variety in the market, smooth variety . . . \$0.30 \$0.23 \$0.16

		5 lb. lot	15 to 100 lb.	
	Per lb.	Per lb.	Per lb.	
Gradus, or Prosperity. —An extra early wrinkled pea, very large pods, of magnificent quality,	\$0.30	\$0.23	\$0.17	
Nott's Excelsior. —A wrinkled dwarf, of excellent variety, early, . . . . .	.30	.23	.17	
Sutton's Excelsior. —Similar to Nott's Excelsior, but producing larger and more abundant pods, . . . . .	.30	.23	.17	
Daisy or Dwarf Telephone. —Dwarf habit, wrinkled, large pods, second early, . . . . .	.30	.24	.18	
Thomas Laxton. —Of similar growth to Gradus, a few days later, pods are deep rich green. In the judgment of many the Thomas Laxton is even sweeter and finer flavor than Gradus,	.30	.23	.17	
Telephone. —Four feet high, large peas of rich, sugary flavor, . . . . .	.30	.24	.18	
Champion of England. —An old standard variety, late, five feet high, . . . . .	.30	.23	.17	
Laxtonian. —Large dark green pod, best early dwarf, . . . . .	.30	.24	.18	
Canada Field. —For stock purposes, (60 lbs. to the bushel,)		at market price		

PEPPER

Should be started in hot beds, and transplanted into open ground by end of May; set in rows eighteen inches apart and plants about twelve inches apart in the rows.

One ounce of seed will produce about 3,000 plants.

	Per pkt.	Per oz.
Sweet Mountain. —Largely grown for both market and home use,	\$0.10	\$0.40
Bull Nose. —This has long been the standard hot sort, . . . . .	.10	.40
Ruby King. —Most popular large red pepper in cultivation, . . . . .	.10	.40
Large Squash. —Thick fleshed, early hot variety, . . . . .	.10	.40
Long Red Cayenne. —The true Cayenne, hot and pungent, . . . . .	.10	.40
Small Red Cherry. —A small smooth and round variety; productive, . . . . .	.10	.40
World Beater. —Large mild, very prolific, . . . . .	.10	.40
Chinese Giant. —Large mild, . . . . .	.15	.50
California Wonder. —(New) Large size, thick shell, mild, . . . . .	.10	.40

While we exercise the greatest care to have all seeds pure and reliable, we do not give any warranty, express or implied, and will not be in any way responsible for the crop.

PUMPKIN

To be cultivated in same manner as squash.

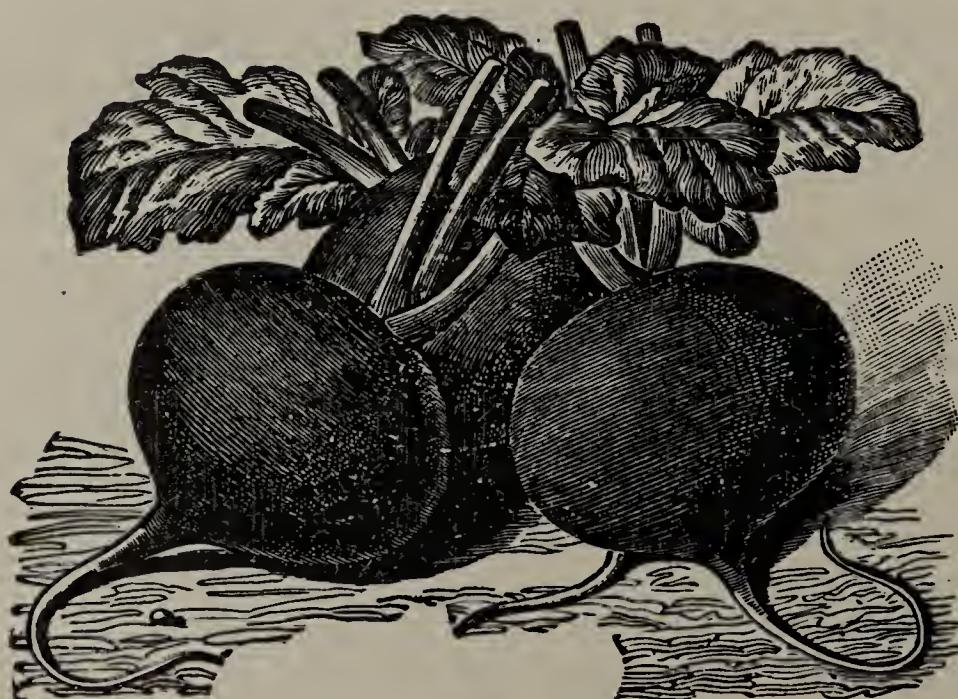
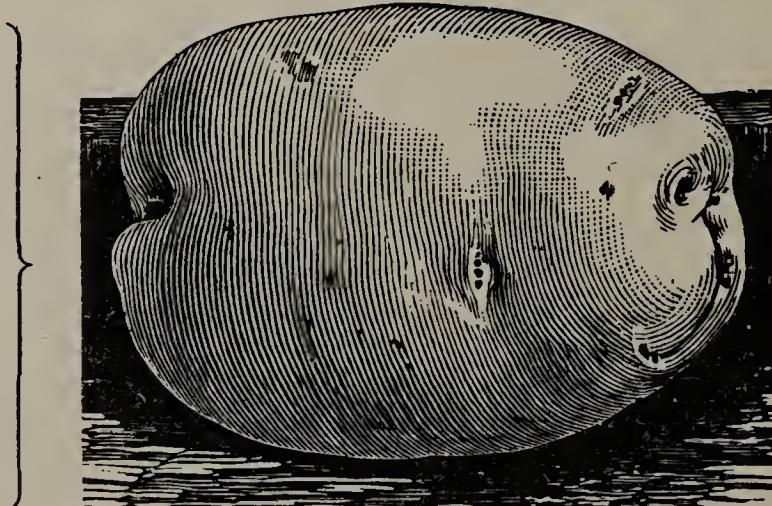
	Per oz.	Per 1b.
Small Yellow Sugar.—A handsome prolific variety, good keeper, best for pies,	\$0.15	\$0.80
Large Cheese.—Very large and good keeping variety, . . .	.15	.85
Connecticut Yellow Field.—Grown largely for stock purposes,	.10	.75

POTATOES— NORTHERN GROWN—MAINE AND VERMONT We Offer Only Certified Seed

Use 16 to 20 bushels, or 6 barrels per acre.

Here in Conn. nearly all markets demand Green Mountains for winter stock. This is the variety that agricultural authorities are always trying to improve and we believe it to be the best variety grown.

Irish Cobbler
Green Mountain
(Improved)
at Lowest Market
Prices.



Deep Scarlet Turnip.

Quantity discount, 5 lbs. or More, .10 lb.

Early Scarlet Turnip.—Round red with white tip,

RADISH

For early use sow in spring as soon as ground can be worked. Sow in drills six to ten inches apart and thin out to one inch apart in the rows; as the roots are more tender and brittle when grown quickly, a rich light soil is preferred. For a succession sow every two weeks.

One ounce will sow 100 feet of drill; eight pounds for one acre.

Per pkt.	Per oz.	Per lb.
\$0.05	\$0.15	\$0.75

	Per pkt.	Per oz.	Per 1b.
Deep Scarlet Turnip.—An all red standard variety, .	.05	.15	.75
Early Long Scarlet, Short Top.—The standard early long variety, . . . . .	.05	.15	.75
French Breakfast.—Most popular variety, of olive shape, red with white tip, quick growing, . . . . .	.05	.15	.75
Scarlet Globe.—One of the best; quite early, very crisp, .	.05	.15	.80
White Turnip.—For summer and winter use, . . . . .	.05	.15	1.00
Black Spanish Long.—Black skin, white flesh—a winter variety, . . . . .	.05	.15	.80
Round Black Spanish.—The favorite German winter radish, .	.05	.15	.80
Rose Color China Winter.—Grows large and tender, good for winter use, . . . . .	.05	.15	.80
Long White Icicle.—Extremely early . . . . .	.05	.15	.80

RHUBARB

Propagate from roots in richly prepared soil. Plants should be set five feet apart.

Victoria Giant— \$0.25 a root

SALSIFY. or Vegetable Oyster

Sow early in spring in light rich soil in drills fourteen inches apart and thin out to three inches apart in the row. The roots will be ready for use in October. When cooked the flavor resembles the oyster.

	Per pkt.	Per oz.	Per 1b.
Sandwich Island Mammoth.—This variety grows to an unusually large size, roots tender and good flavor, .	.10	.25	1.75

SPINACH

For very early spring use sow in August, for summer use sow in early spring, in drills about ten or twelve inches apart, covering the seed one inch deep. To obtain a succession sow at intervals of two weeks through the season. One ounce to 100 feet of drill, 10 pounds to one acre.

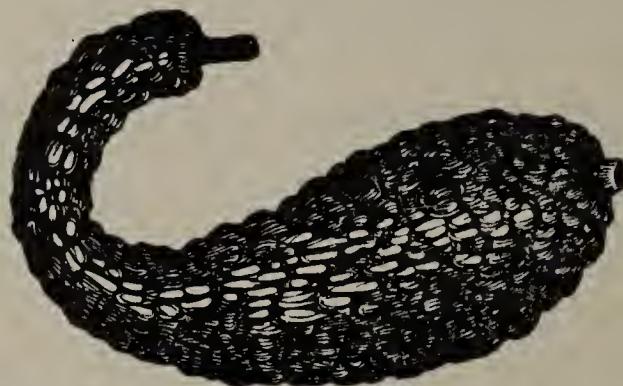
	Per oz.	Per $\frac{1}{4}$ lb.	Per lb.
Round Thick Leaf.—Produces dark thick leaves, somewhat crumpled, . . . . .	.10	.20	.40
Large Viroflay.—Grows extra large size, reselected, .	.10	.20	.40
Princess Juliana.—Improved long season one of the best summer spinach, . . . . .	.10	.20	.40
King of Denmark.—Summer spinach, . . . . .	.10	.20	.40
New Zealand.—A very productive spreading plant, .	.10	.25	.80
Nobel Giant Leaved . . . . .	.10	.20	.40
Savoy Leaved Long Standing.—For summer sowing, .	.10	.25	.40
Savoy Leaved Blight Resisting—Good only for fall sowing	.10	.25	.40
Old Dominion.—New long standing, . . . . .	.10	.25	.65

Ask for prices in larger quantities.

SQUASH

Requires rich, warm soil. Plant in hills nine to ten feet apart for running varieties, and five or six feet apart for bush sorts. Leave two or three plants to a hill. Cultivate frequently.

One ounce will sow twenty to forty hills; two to four lbs. per acre.



Summer Crookneck.

	Per pkt.	Per oz.	Per lb.
Giant Summer Straightneck.—	\$0.05	\$1.20
Early Summer Crookneck.—The finest bush variety,05	.15
Giant Summer Crookneck.—Larger than the early summer,05	.15
Early White Bush Scallop.—Matures early and bears continuously,05	.15
			1.00



Hubbard Squash.

Hubbard.—The well known and most popular winter squash,	. . . . .	.05	.15	1.30
Boston Marrow.—A bright orange colored squash for autumn, very productive,	. . . . .	.05	.15	1.00
Mammoth Chili.—Extra large, grows upwards 100 pounds at times,	. . . . .	.10	.15	1.50
Golden Hubbard.—Similar to the standard Hubbard but smaller and earlier and of a golden red color,	. . . . .	.05	.15	1.30
Cocozelle.—Compact bush growth, fruit oblong, foot or more in length, skin dark green with stripe,	. . . . .	.05	.15	1.30
Blue Hubbard.—Popular variety,	. . . . .	.05	.15	1.50
Table Queen.—Fine for baking,	. . . . .	.10	.20	1.65
Golden Delicious.—A most attractive bright orange variety	. . . . .	.10	.15	1.30

TOMATO



Livingston's Beauty.

Sow the seed in March or April in hot bed. Transplant when plants are five inches high to open ground, after danger from frost has passed. Should be set four feet apart each way, on mounds of earth, to allow foliage to open and sun to reach the fruit.

While we exercise the greatest care to have all seeds pure and reliable, we do not give any warranty, express or implied, and will not be in any way responsible for the crop.

	Per pkt.	Per oz.	Per $\frac{1}{4}$ lb.
Spark's Earliana. —The earliest large red grown, exceedingly productive, . . . . .	.10	.30	1.00
Bonnie Best. —Very early, vigorous grower, smooth, brilliant, scarlet fruit, very prolific, . . . . .	.10	.30	1.00
Marglobe. —(New) Midseason globe shaped scarlet, . . . . .	.10	.30	1.00
Livingston's New Stone. —Large, smooth, solid, scarlet color, . . . . .	.10	.25	.85
Acme. —A standard variety, round, bright pink in color, . . . . .	.10	.30	1.00
Ponderosa. —Largest variety grown, . . . . .	.15	.50	1.75
New Dwarf Champion. —Most popular of dwarf varieties, fruit deep purplish red, . . . . .	.10	.40	1.35
Yellow Plum. —Small, elegant, fine for preserves, . . . . .	.15	.60	2.00

TURNIP

For early varieties sow as soon as the ground can be worked in spring.

For fall and winter use, seed should be sown from the middle of July to middle of August, seed generally sown broadcast, using one pound to the acre.



Early Flat Dutch.

Quantity discount, 5 lbs. or more, .10 lb.

	Per oz.	pkt.	Per $\frac{1}{4}$ lb.	Per lb.
Early Purple Top Milan. —Finest early, . . . . .	.05		.25	.80
Early Flat Dutch White. —A popular market variety, . . . . .	.05		.20	.50
Purple Top Strap Leaf. —One of the standard flat varieties, . . . . .	.05		.20	.50
Yellow Globe. —Fine for table use, fall and winter, . . . . .	.05		.20	.50

	Per oz.	pkt.	Per $\frac{1}{4}$ lb.	Per lb.
Golden Ball.—Very tender, fine flavored,	\$0.05	\$0.20	\$0.60
White Egg.—Handsome, oval form, thin skin,05	.20	.60
Cow Horn.—Pure white, except at top,05	.20	.60
Purple Top White Globe.—A thick, round, quick growing variety,05	.20	.50

RUTA-BAGA

Seed should be sown in drills thirty inches apart, thin out to one foot apart in the row.

	Per oz.	pkt.	Per $\frac{1}{4}$ lb.	Per lb.
American Purple Top Swede.—Flesh deep yellow, free growing,	\$0.10	\$0.20	\$0.60
White Rock or Sweet German.—White and sweet, a good keeper,10	.20	.60
Long Island Purple Top.—Yellow turnip of best quality,10	.20	.60

HERBS

	Per pkt.	Per oz.
Summer Savory,	\$0.10
Sage,10
Sweet Marjoram,10
Thyme,10
Dill,05

SWEET PEAS

	Per pkt.	Per oz.	Per $\frac{1}{4}$ lb.	Per lb.
Spencer Mixed, large flower with long stem,	\$0.10	\$0.15	\$1.50

TOBACCO

We are very careful in the selection of our tobacco seed, growing much of it on our own farm and saving the seed from only such plants as bear the correct type of leaf. We buy only of the most reputable growers. This seed is thoroughly blown which removes all the light seed, as we believe the heavier seed makes the strongest plants.

	Per $\frac{1}{4}$ oz.	Per oz.	Per lb.
Willow Brook Broadleaf.—Specially grown and selected,	\$0.25	\$0.50
John Williams' Broad Leaf,25	.50
Havana. Special selected type, round point leaf, very choice,25	.50
Cuban Type, shade grown,40	.75
Round Tip, (not Havana)40	.75

While we exercise the greatest care to have all seeds pure and reliable, we do not give any warranty, express or implied, and will not be in any way responsible for the crop.

**It Pays to use
OUR COMPLETE FERTILIZER
FOR THE TOBACCO CROP.**



A very fine crop of Broadleaf Tobacco grown on O. & W. Blue Label Tobacco Fertilizer by Mrs. Margaret Tobin, Windsor Locks, Conn.



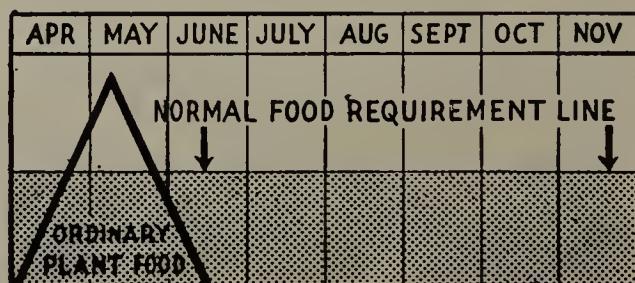
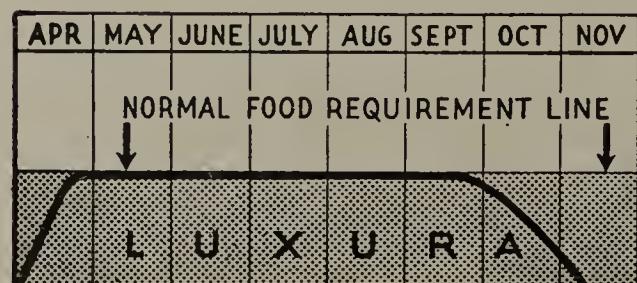
Havana Tobacco grown on O. & W. Fertilizer by Walter R. Miller, East Granby, Conn.

A BIGGER DOLLAR'S WORTH IN PLANT FOOD

People now know that there is a great difference in plant foods. Some applied early in the spring may feed lawns and plants for a month or so, then they are gone. They may even over-feed for a short period. That is because the ordinary plant food is made of elements that quickly dissolve in the moist soil, releasing nourishment to the plants in a quick rush, and then just when growing things need help, quitting on the job. Luxura, because of its many carefully planned ingredients, continues to release wholesome nourishment in series right through the growing months to maturity.

Before Buying Plant Food Find Out How Long It Continues to Nourish

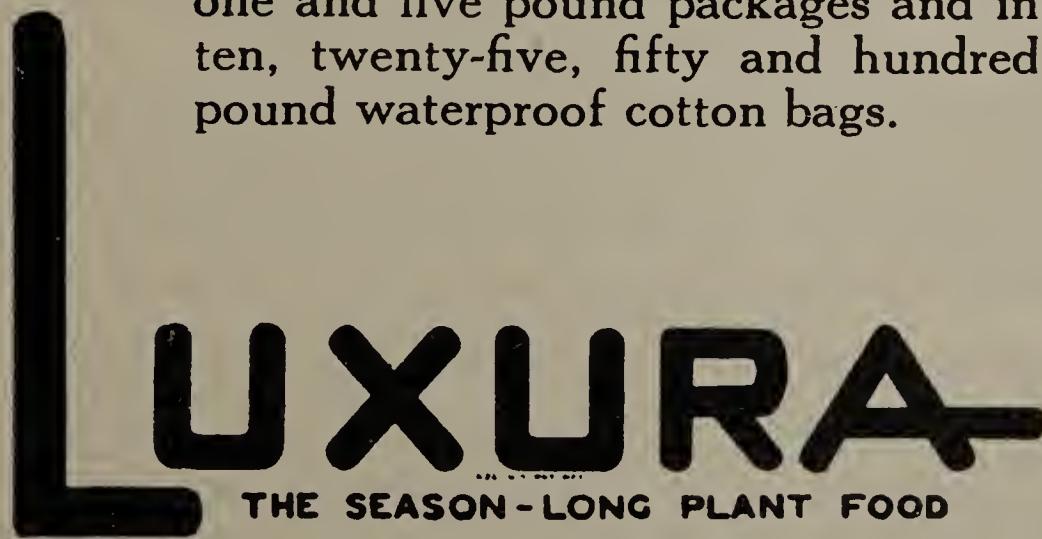
This chart shows why Luxura is more effective and economical. It shows why some gardens droop in mid-season. It shows why Luxura-fed plants and lawns never disappoint.



Because one application works all season, Luxura is by far more economical to use than ordinary plant foods in spite of its slightly higher price per pound—to say nothing of the saving in time and labor. Luxura's slightly higher cost is necessary because of its more complete and more effective formula.



Luxura can be obtained in convenient one and five pound packages and in ten, twenty-five, fifty and hundred pound waterproof cotton bags.



Manufactured by
OLDS & WHIPPLE, INC., Hartford, Conn.



THE VALUE OF A FINE LAWN

A fine lawn is a profitable investment. It represents a real addition to the value of your property and unquestionably repays you richly in the enjoyment you derive from its beauty and in its actual, though unappraisable, financial worth.

TO BUILD A NEW LAWN

Start right. If your plot is small, dig it to a depth of 8 to 10 inches. A larger plot can be ploughed. The soil should then be thoroughly pulverized, apply a good lawn fertilizer at the rate of about five pounds to each 100 square feet and rake smooth.

SOWING THE SEED

Use plenty of seed — remember a thick grass sod is the best protection against weeds. Sow at the rate of $\frac{3}{4}$ to 1 pound to each 200 square feet, divide the seed in half and go over the ground twice, making the second sowing at right angles to the first. Choose, if possible, a cloudy day without wind, when rain seems promised. Sow the seed evenly and rake it in uniformly, then roll the ground thoroughly. Rolling keeps the lawn even, makes the soil compact and protects the roots from drying out. The best times to sow are in the early spring and in the fall — from August 15th to November 1st. This latter period is nature's seeding time.

RE-SEEDING

Every lawn, regardless of how thick the sod may be, is benefitted by a light seeding Spring and Fall. This is particularly advisable in the Fall.

Bare spots should be dug up and reseeded. Thin spots may be scratched up with an iron rake, seeded and rolled.

Choice of Seed

A good lawn grass mixture should be composed of nothing but true turf grasses in the right proportions, carefully recleaned to remove dirt, chaff and weed seeds as much as possible. Avoid mixtures containing cheap grasses which do not belong in a lawn. The cost of the seed is the smallest item in the making of a good lawn; it pays to choose good seed.

Prime Lawn Grass Mixture.—A quick growing mixture, containing some grasses which produce immediate growth, forming a nurse crop for the finer grasses which are slower growing. 1 lb. package 35c; 5 lb. bag \$1.40; 10 lb. bag \$2.70; 25 lb. bag \$6.25.

Eureka Lawn Grass Mixture.—A superior mixture of the best and cleanest grades of seed. The varieties which it contain are best adapted to general lawn purposes. 1 lb. package 45c; 5 lb. bag \$1.75; 10 lb. bag \$3.30; 25 lb. bag \$7.50.

Superfine Lawn Grass Mixture.—All that the name implies—composed entirely of the fine slow growing grasses which produce a soft, velvety, permanent lawn, firm turf and desirable color. 1 lb. package 60c; 5 lb. bag \$2.50; 10 lb. bag \$4.50; 25 lb. bag \$10.50.

SHADY SPOTS

In spots shaded by trees or buildings, give special attention to fertilizing and watering and sow a special shady place grass mixture. Remember that trees and shrubbery draw heavily on the food and water in the soil, so extra quantities of both must be provided to keep the grass supplied.

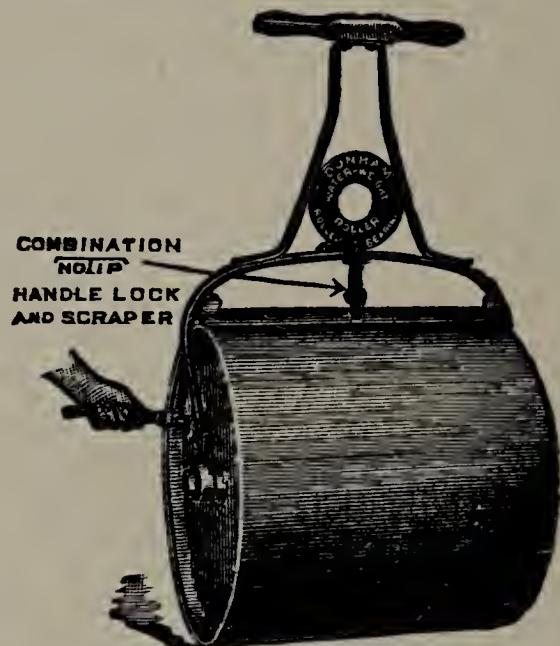
Eureka Shady Spot Lawn Grass Seed.—1 lb. package 45c; 5 lb. bag \$2.00; 10 lb. bag \$3.80; 25 lb. bag \$8.75.

Superfine Shady Spot Lawn Grass Seed.—The best selection of fine grasses which thrive under the shade of trees or between buildings where there is little sun. 1 lb. package 65c; 5 lb. bag \$2.75; 10 lb. bag \$5.00; 25 lb. bag \$11.25.

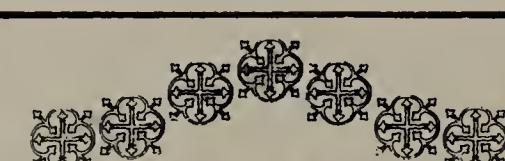
Water Weight Lawn Rollers

At least one rolling a year is necessary to preserve a healthy turf. This should be done early in the spring, as soon as the ground is dry, to re-firm the soil about the roots after it has been loosened and heaved up by the freezing and thawing of winter. The roller should weigh 150 to 300 pounds, depending on the texture of the soil.

The water weight lawn roller has almost entirely superseded the old fashioned cast iron roller. By regulating the amount of water it can be made to weigh as desired.



Diameter	Width of Drum	Weight Empty	Weight Full	Net Price
Plain bearing.....14 in.	24 in.	68 lbs.	175 lbs.	\$10.50
Plain bearing.....18 "	24 "	82 "	265 "	12.00
Roller bearing.....24 "	24 "	110 "	420 "	18.00
Roller bearing.....24 "	32 "	130 "	565 "	20.00



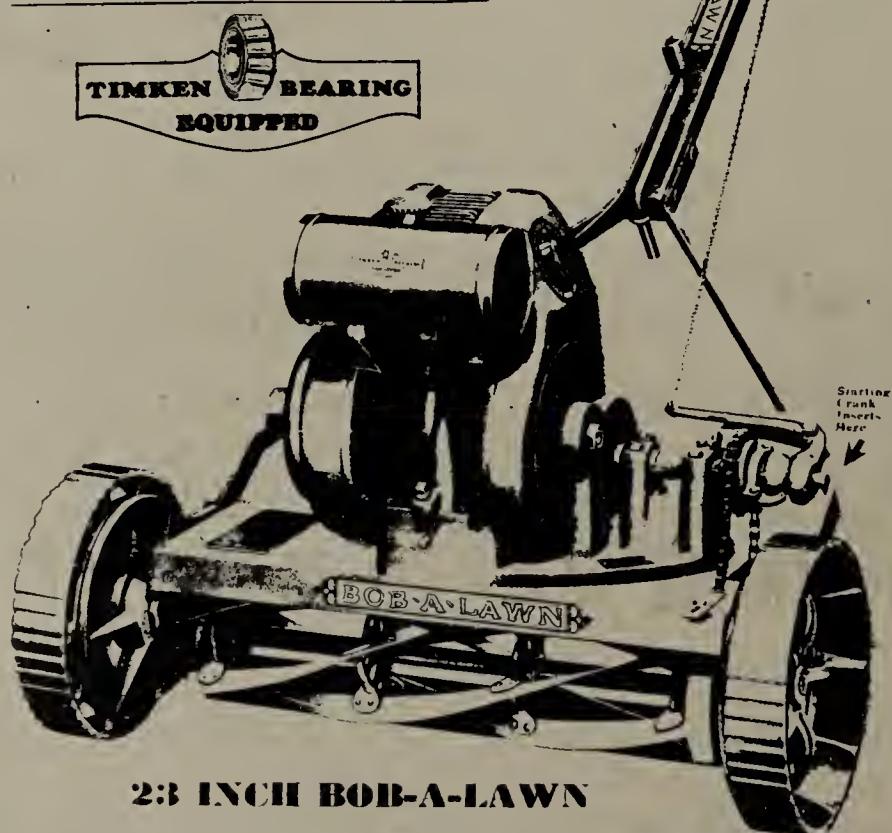
HERE is pictured the BOB-A-LAWN—the celebrated Power Lawn Mower—driven by the especially designed four cycle, vertical type, air cooled Cushman engine. This engine is equipped with the latest rotary type high tension magneto, mounted within the flywheel and fully enclosed—Timken Bearing Equipped—and other quality features, and is simple, reliable, dust and moisture proof and self-lubricating from positive oil pump. Carburetor and air cleaner standard equipment.

The BOB-A-LAWN cutting unit is especially designed and built to stand hard usage. Frictionless Timken Bearings insure highest efficiency.

BOB-A-LAWN

Two Sizes

19 and 23 Inch

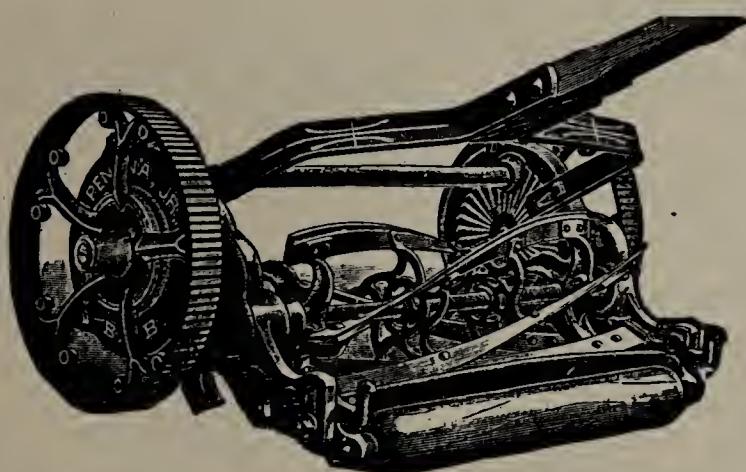
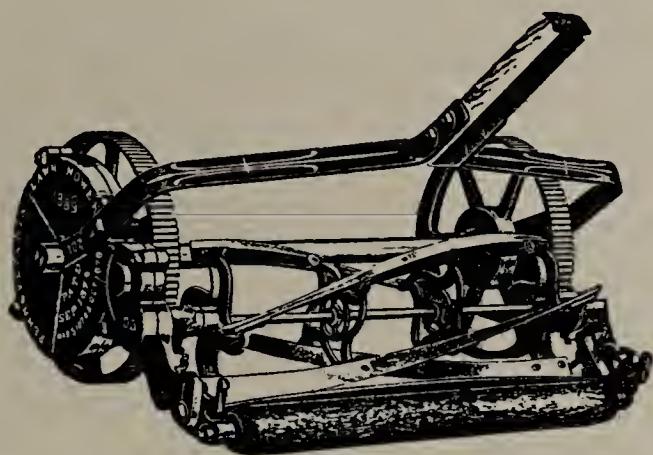


23 INCH BOB-A-LAWN

Lawn Mowers

The Standard Pennsylvania is the pioneer of all lawn mowers, having an open cylinder, open wheels and a train of gears.

Width of cut 15 in. 17 in. 19 in. 21 in.
Price \$23.50 \$26.50 \$30.00 \$33.00

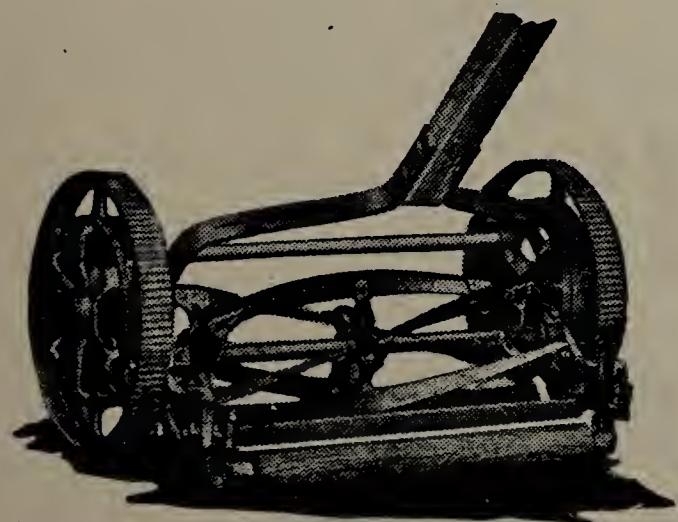
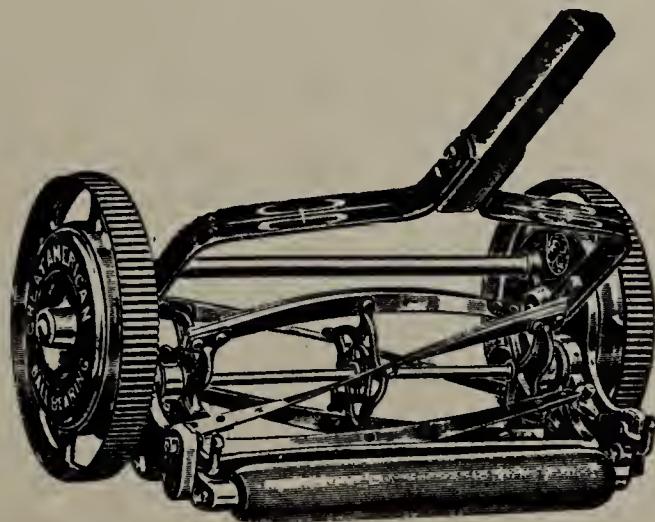


The Great American Ball Bearing is the best all-round mower of its type made. The perfectly fitting ball cups and cones insure an easy running machine.

Width of cut 15 in. 17 in. 19 in. 21 in.
Price \$16.00 \$18.00 \$20.50 \$22.50

The Pennsylvania Jr. Ball Bearing has all the good points of the Standard Pennsylvania, with the addition of some features that make it the most perfect grass cutter in the world.

Width of cut 15 in. 17 in. 19 in. 21 in.
Price \$23.50 \$26.50 \$30.00 \$33.00



Wm. Penn a type of lawn mower that will give good service and satisfaction on any kind of a lawn.

Width of cut 16 in. Price \$15.00

O. & W. Mowers, a good mower at a low price.

Width of cut 14 in.	Price \$ 7.00
“ “ “ 16 in.	“ 8.50
“ “ “ 18 in.	“ 10.00

O. & W. High Grade FERTILIZERS

And Fertilizing Materials For
LAWNS, GARDENS, FLOWERS, SHRUBBERY, ETC.

	100 Lb.	50 Lb.	25 Lb.	10 Lb.	5 Lb.
LUXURA	\$7.00	\$4.00	\$2.25	\$1.15	\$0.70
O. & W. Garden Fertilizer	3.00	1.75	1.00	.60	.35
O. & W. Lawn Fertilizer	3.00	1.75	1.00	.60	.35
Steamed Bone Meal	3.00	1.75	1.00	.60	.35
Raw Bone Meal	3.50	2.00	1.25	.65	.40
Sheep Manure	3.00	1.75	1.00	.60	.35
Superphosphate	2.00	1.25	.75	.40	.25
Hard Wood Ashes	2.75	1.60	.90	.60	.35
Cotton Seed Meal	2.75	1.60	.90	.60	.35
Castor Pomace	2.50	1.50	.85	.50	.30
Alphano Humus	2.00	1.25	.75	.50	.30
Hydrated Lime	1.50	.85	.50	.30	.20
Ground Limestone	1.25	.75	.45	.25	.15
Nitrate of Soda	3.50	2.00	1.25	.65	.40
Tobacco Dust	3.50	2.00	1.25	.65	.40
Land Plaster	2.00	1.25	.75	.40	.25
Sterilized Ground Stems	3.00	1.75	1.00	.60	.35
Muriate of Potash	4.50	2.50	1.50	.75	.45
Sulphate of Potash	4.75	2.75	1.50	.75	.45
Sulphate of Ammonia	3.50	2.00	1.25	.65	.40
Dry Ground Fish	4.50	2.50	1.50	.75	.45
Driconure	5.00	2.75	1.75	.90	.50
Nitrophoska 15-30-15	8.00	4.75	2.75	1.50	.90
Floranid (Urea)	9.00	5.00	3.00	1.75	1.00
Ammo-Phos 20-20	4.75	2.75	1.75	.90	.50
Ammo Phos 13-48	5.00	3.00	2.00	1.00	.60
Salt (Agricultural)	1.50	.85	.50	.30	.20

Peat Moss—\$3.00 Bale. 5-bale lots \$2.75.

Tobacco Stems—\$1.75 per 100 lbs. In bales of 200 or 300 lbs.

Special Prices on Larger Quantities

Prices subject to change

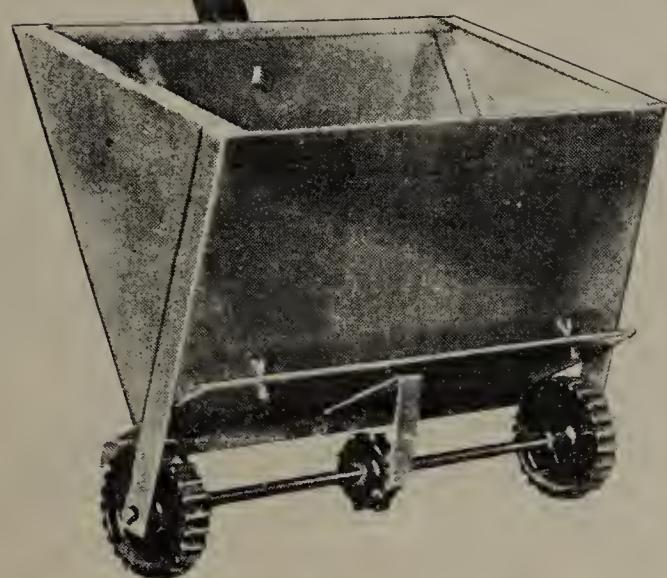


FOR LAWNS

The Luxura Hand Plant Food Distributor

For Gardeners, Florists, Nurserymen, Truckers, Farmers, etc. Is a new, inexpensive time and labor-saving device; convenient for sowing lawn seed on small areas.

Price—\$1.00



Small Vibrator Plant Food Distributor

(As Shown)

Was designed and built to meet the demand for a light, practical spreader which would be positive in action. Fourteen-inch size, for small lawns and gardens. Capacity 10 lbs.

Price—\$2.00

Large Vibrator Plant Food Distributor

Is mounted on 12-inch diameter wheels so as to make it easy to push across a lawn or garden. A steel rod on top of the handle allows you to regulate the amount of plant food while in operation. It also provides a locking device which prevents any of the material from coming out when not wanted. Guaranteed to spread the plant food evenly.

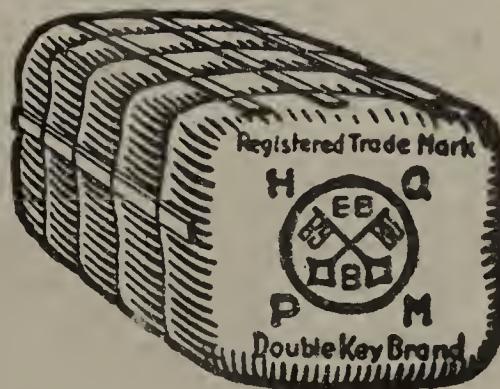
Hopper is 26 inches long—Capacity, 50 lbs., Price—\$10.50

Imported Granulated Peat Moss (Turf Mull)

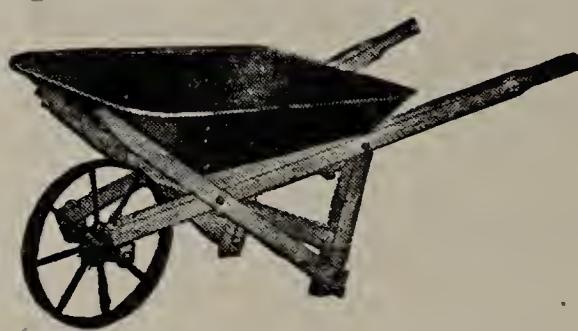
A plant requires as much as 95 per cent of moisture for its growth, and there is no better medium to supply this, than peat moss. The high absorbing quality of peat moss retains at the same time the fertilizing properties of all commercial or natural fertilizers, manures and plant food.

Peat moss comes in bales (20x22x40 inches) which contains about 20 bu. One bale will cover 250 square feet 1 inch deep.

Price per bale \$3.00—5 bale lots \$2.75 each



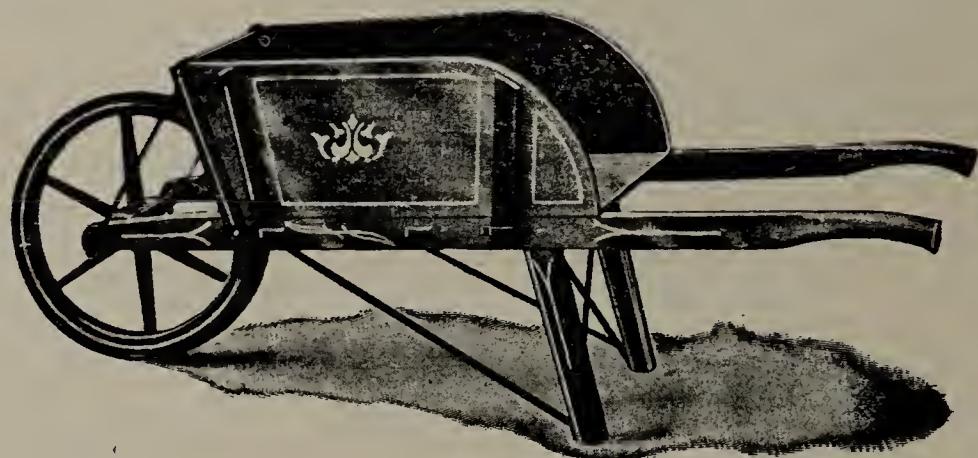
All-Wood Frame Steel Tray General Purpose BARROW



For the contractor, farm, garden and home use, cheapness and lightness have not been gained by sacrificed strength, rigidity or finish. And it has not been made by simply building it "child size". It is a real man's barrow and is made for real work.

Price \$5.00 Net.

GARDEN BARROWS



These barrows are nicely painted and striped, either red or green and built to last a lifetime.

	Number	With Wood or Steel Wheels	Inside Measurement of Box, Length, Inches	Width at Wheel End, Inches	Width at Handle End, Inches	Depth, Inches	Diameter of Wheel, Inches	Tread of Wheel, Inches	Weight Each, Pounds	Net Price.
Eastern Garden	3	Medium	24	16	20	10 1/2	18	1 1/2	40	\$7.00
Eastern Garden	4	Large	26 1/2	18 1/2	23	12	20	1 1/4	45	7.50
Buch's	2	Large	27	20	24	12	20	1 3/4	50	8.25
Buch's	3	Medium	26	19	22	12	20	1 3/4	50	7.75
John Deere		Medium	27	19	22	13	20	1 3/4	50	8.00
John Deere		Large	29	20	23	16	20	1 3/4	55	8.50

MORTAR BARROWS



Lansing	No. F2	(as shown)	\$7.50
"	" F24	(deeper tray)	8.00
John Deere	" C3 1/2	(oval front)	8.00



Tomatoes grown on O. & W. Fertilizer by Manning Bros.,
Thompsonville, Conn.



Cauliflower grown on O. & W. Fertilizer by Silver Lane Pickle Co.,
East Hartford, Conn.

List of Grass, Clover and Millet Seed

(At market Prices)

Timothy, or Herd's Grass. One of, if not the commonest and best known grasses. Very valuable for hay. Perennial, fibrous and often bulbous rooted. (45 lbs. to the bushel).

Red Top. Is a fine permanent grass. Often sown with timothy and red clover, in which case the clover soon disappears to be replaced by timothy, which in turn gives way to the red top. Very valuable in mixtures for permanent pastures.

Chaff Red Top 10 lbs. to the bushel. Fancy or cleaned 35 lbs. to the bushel.

Kentucky Blue Grass. Also called June grass. Root-creeping, perennial, flowers in June. It requires about two to three years to become well set and does not arrive at perfection as a pasture grass until the third or fourth season. (14 lbs. to the bushel.)

Orchard Grass. A perennial grass, flowers from June to July. Very valuable for pastures, also in connection with timothy and clover for hay crops. When used with timothy use one bushel orchard and 8 lbs. clover. If sown alone use three bushels to the acre. (14 lbs. to the bushel.)

Sudan Grass. A quick growing annual. A forage crop of great value. Stools freely. Grows 3 to 5 ft. tall, two and sometimes three crops can be cut. Grows until frost. When sown broadcast use 25 lbs. per acre.

Rhode Island Bent. Root-creeping, perennial, flowers in July. Very valuable for lawn purposes. Sow from three to four bushels to the acre. (10 lbs. to the bushel.)

Large Red, or Mammoth Clover. Grows from four to five feet high; stocks so coarse that cattle will eat but leaves only, but by its judicious use, exhausted lands may be reclaimed. (60 lbs. to the bushel.)

Medium Red Clover. The most important of all the varieties of clover for the practical purposes of agriculture. Sown with timothy and other grasses it produces desirable hay or pastures. (60 lbs. to the bushel.)

White Clover. The value of this clover is well known; it is found in most every natural pasture. It is adapted to all soils. Being deep-rooted it withstands drought when grown on dry, sandy sections. It should form a part of all mixtures for permanent pastures. (60 lbs. to the bushel.)

Alsike, (Clover). This is one of the hardy varieties. It resists cold, extreme drought and wet, and on rich warm soils yields immense crops of hay, or pasture of good quality. (60 lbs. to the bushel.)

Alfalfa (Clover). A heavy forage crop doing well in almost all localities. Requires well limed soil and good drainage.

Hungarian (grass) Millet. Splendid forage crop for light land. On rich land two crops may be grown the same season. Withstands drought and yields abundantly. (48 lbs. to the bushel.)

Golden, or German Millet. A heavier cropper than the Hungarian, and needs a longer season and a stiffer soil, stands up well, is easily cured, makes a coarse, harsh hay, which is greedily eaten by all kinds of stock. (50 lbs. to the bushel.)

Japanese Millet. This is by many considered the most valuable of all forage plants. It makes more hay than German millet or any other. Although it grows large, sometimes seven or eight feet high, the hay is of excellent quality. It is adapted to all sections.

Use O. & W. Special Grass Fertilizer
The Fertilizer That Makes Grass Grow.

Leguminous Plants as Soiling Crops

All the leguminous plants (peas, clovers and beans, etc.,) have the power of taking up the free nitrogen in the air and converting it into available forms of ammonia so very valuable as a fertilizing ingredient to the soil.

Therefore the roots (or, as in some cases where the entire plant is turned under) provides a large supply of available ammonia for the crops which are to follow.

Cow Peas,	.	.	.	.	.	at lowest market prices
Soja Beans (Soy Beans),	.	.	.	.	"	"
Mammoth Clover,	.	.	.	.	"	"
Medium Clover,	.	.	.	.	"	"
Vicia Villosa, or Hairy Vetch,	.	.	.	.	"	"

GRAINS

Barley,	.	.	.	.	.	at lowest market prices
Japanese Buckwheat,	.	.	.	.	"	"
Rye,	.	.	.	.	"	"
Seed Oats,	.	.	.	.	.	at market price

Canada Field Peas. Grown largely with oats as fodder crop. At market prices.

Use "O.&W" Special Grain and General Crop Fertilizer

NOD-O-GEN

The Best Inoculation for All Legume Seeds Means Better Crops



1-bu. size for Medium (Red) Mammoth, Alsike White Dutch, and Crimson Clovers	\$0.75
1/2-bu. size for above .....	.50
1-bu. size for Soy Beans .....	.50
5-bu. size for Soy Beans	2.00
1-bu. size for all Vetches (Field, Garden, and Sweet Peas) .....	.50
1-bu. size for Field Beans and Garden Beans .....	.50
Garden size, Combination for Peas and Sweet Peas, Garden Beans and Limas .....	.25
1-bu. size for Alfalfa and Sweet Clover .....	.75
1/2-bu. size for Alfalfa and Sweet Clover .....	.50





Northern Grown Certified Seed Potatoes

Certified Irish Cobbler.—An excellent extra early variety, will mature in seven weeks from time of planting; in color pure white with deep eyes, usually of good cooking quality.

Certified Improved Green Mountain.—This variety is too well known to require any description; it is recognized as the standard of excellence in all New England; white skinned, oval formed, smooth and attractive and a good yielder.

Don't waste labor and fertilizer on poor seed. Get the best.

Our certified seed potatoes have been carefully selected from fields in Aroostook County, Maine and Vermont.

What "Certified" Means

It means the same to the planter that a pure bred pedigree bull or boar means to the stock raiser. It means the best bred planting stock, freedom from diseases that will reduce your yield; it means bigger and better crops of smooth potatoes that will yield you a better profit. Certified seeds cost so little more than ordinary seeds compared with the value of the crop that the small difference in the cost is not worth considering.

The potato, while widely grown in the United States on many different kinds of soil, does better on certain types of soils than others.

If one were attempting to describe an ideal soil for potatoes, it would be about as follows: The soil should work easily and not get in poor physical condition after heavy rains; should be well supplied with organic matter or humus; and should be well drained but possess a good water-holding capacity, due to the presence of organic matter on the one hand and a proper proportion of the fine soil constituents, silt and clay, on the other. The soil should possess a good physical condition to some depth to enable the roots of the potato plants to enter the soil readily and allow for proper tuber development.

**It Pays to use
O. & W. High Grade Potato Fertilizer**



TELEPHONE

ALBERT E. FOWLER
GROWER AND PACKER OF
CONNECTICUT LEAF TOBACCO
WESTFIELD, MASS.

Olds & Whipple,
Hartford,
Connecticut.

Dear sirs:

You will, no doubt, be gratified to hear the results of my potato yield on land fertilized with your product.

I grew 140 acres of potatoes mostly on tobacco land. The yield was about 70,000 bushels. On land where I had not grown tobacco, I used a ton of your 4-8-7 fertilizer. On tobacco land I used 1500 pounds of your 4-8-7.

An acre of the land was measured off by County Agent Locke and the yield was 625.8 bushels. This record certainly speaks well for your fertilizer.

Very truly yours,

AE. Fowler

November 30, 1932

Insecticides and Fungicides

Arsenate of Lead Powder. Can be used for dusting (mixed with Hydrated Lime) or spraying to kill most chewing insects on Plants, Trees, Shrubs, etc.

Bee Brand Insect Powder. Ground from pyrethrum flowers, harmless to mankind and domestic animals. For use against mosquitoes, bed bugs, lice on fowls, ants, roaches, moths, flies, fleas, and many other insect pests.

Black-Leaf "40". A concentrated solution of Nicotine Sulphate — For spraying to destroy sucking insects.

Bordeaux Mixture. Powdered. A mixture of Copper Sulphate and Lime, used to control all fungus and blight on low crops and grapes.

Bug Death. A non-poisonous insect killing powder, for worms, bugs and caterpillars.

Calcium Arsenate Powder. A poison for chewing insects on potatoes and other low crops. (Do not use on trees or grapes).

Copper Sulphate. (Blue Stone).

Crow Repellent. Non-poisonous, used to protect corn after planting from birds and animal pests.

Dry Mix. A sulphur lime casein mixture used as a spray for diseases on fruit trees.

Emulso. An oil emulsion applied at dormant or delayed dormant on trees for the control of red mite, aphis, scale, etc.

Fly Spray Liquid. For protection of horses, cattle, dogs and hogs from flies, mosquitoes, fleas and lice.

Koloform. A superfine Dry Mix. containing Colloidal Sulphur.

Lime Sulphur Solution or Lime Sulphur Powdered. For dormant spraying of fruit and shade trees also bushes against San Jose and Oyster Shell Scales, also for peach leaf curl and brown rot of peaches.

Monohydrated Copper Sulphate. Mixed with lime it is used as a dust for blight control, mostly on potatoes.

Paris Green. Used principally in poison bran mash for cut worms, etc.

Pyrethrol. A concentrated insecticide for killing the Japanese beetle, also useful against many other garden, hothouse, orchard, farm and house pests.

Ryrox For the control of insects and blights on low crops and grapes.

Red Arrow Insect Spray. A concentrated Liquid Insecticide.

Wetex. A superfine Dry Mix with Lead Arsenate for spraying all trees for the control of insects and diseases.

The Myers Compressed Air Sprayer.

With 20" Brass Extension Rod and 45 Degree Nozzle.

Fig. 2416



SCREW CONNECTED HOSE
QUICK DETACHABLE

Fig. 1892

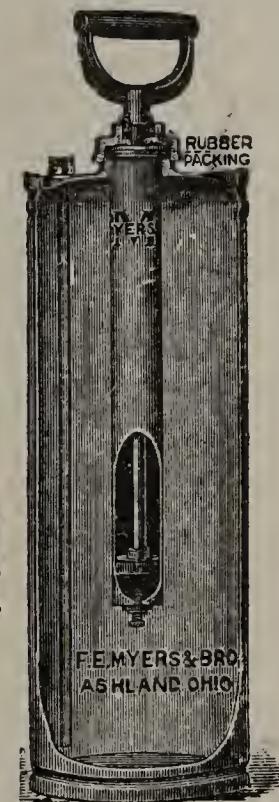


Fig. 2415



Capacity 2 1/2 Gallons.

Capacity 4 1/4 Gallons.

Figs. 2415, 2416 and 1892 illustrate the Myers Compressed Air Sprayer as built in two sizes: 2 1/2 and 4 1/4 gallons capacity (**both over-size**) meeting all demands for this style of sprayer.

THE TANK is made of heavy galvanized iron or brass. THE SIDE WALLS are double seamed, riveted and soldered. THE TOP and BOTTOM are extra heavy material with flanged edge over which the side walls are turned and thoroughly soldered. Has 1 3/4" Brass Tube Cylinder. The nut is operated by lugs on the lower part of the Handle, which engage in opening at the top of the nut. By means of the lugs on the handle the nut can be screwed tightly to the top of the tank, and at the same time lock the Plunger in position, which also permits of the tank being carried by the Handle when desired.

The **45 degree Nozzle and 20" Brass Extension** furnished without extra charge are so constructed that the Nozzle can be attached to the end of the Brass Rod or direct to the connection at the end of the Hose, giving the advantage of 45 degree discharge either way.

Fig. 1892 shows Sectional View of Compressed Air Sprayer.

The Valve is simple and effective. Can be instantly removed for repairs.

PRICE LIST, Represented by Figs. 2415 and 2416.

No. 2296,	Myers 2 1/2 Gallon Compressed Air Sprayer, Fig. 2415, with 20" Brass Extension Rod. GALVANIZED TANK. List.....	PADNA	\$ 4.50
No. 2296B,	Same as No. 2296 with BRASS TANK. List.....	PADOY	7.50
No. 2297,	Myers 4 1/4 Gallon Compressed Air Sprayer, Fig. 2416, with 20" Brass Extension Rod. GALVANIZED TANK. List	PADTO	5.00
No. 2297B,	Same as No. 2297 with BRASS TANK. List	PADUM	8.50
	3/8" Three-ply Hose, per foot	PABIN	.09
Fig. 480,	Four foot 1/4" Iron Pipe Extension, with faced coupling	PADWI	.40

The Myers Cog Gear Spray Pump

(Double Acting)

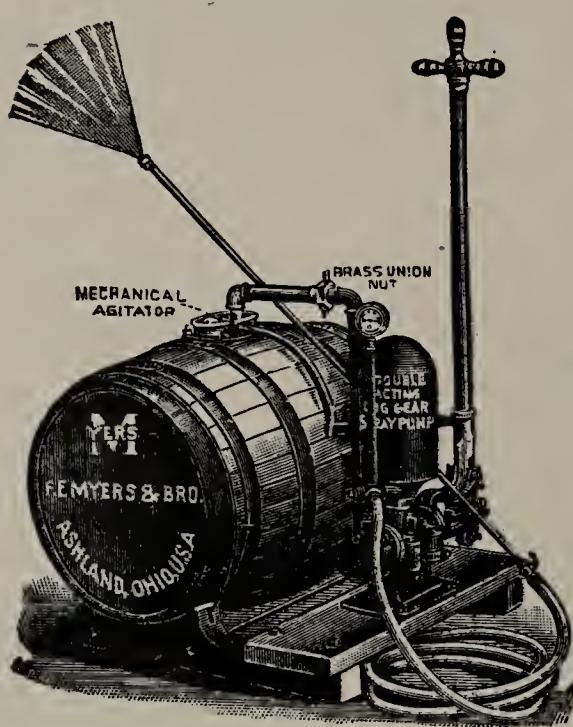
With brass valves and ground bevel brass seats, 2" seamless brass removable cylinder, hemp packed plunger and double lever shut-off discharge.

SPECIAL FEATURES: Cog Gear Movement increases the leverage, adapting it for spraying under heavy pressure. Mounted complete. Occupies smallest possible space. Capacity sufficient for 8 nozzles. An ideal outfit for spraying potatoes. Will set in an ordinary farm wagon box.

No. R316 C Pump complete, 50 gallon barrel mounted as shown, with pressure gauge, two 15 ft. leads of $\frac{3}{8}$ in. 7 ply discharge hose, two Fembro nozzles, two 8 ft. pipe extensions with lever shut-offs and mechanical agitator.

Price \$54.00.

Net Cash Price \$51.30.



No. R336 B. Myers Portable Sprayer

Complete as shown in illustration, with dasher agitator, 15 feet $\frac{1}{2}$ in. 5 ply discharge hose, 8 foot extension and Vermorel nozzle.

Price \$22.50.

Net Cash Price \$21.38

No. R324

Myers Cog Gear Lever Bucket Spray Pump

With agitator, complete with detachable hose and graduating Vermorel fine sprinkling and solid stream nozzle.

Price \$5.50.

Net Cash Price \$5.23.



No. 327½ Myers Little Giant Brass Bucket Spray Pump

With agitator, complete with hose and imperial combination fine, coarse spray and solid stream nozzle, with malleable foot rest.

Price \$3.50.

Net Cash Price \$3.33.



No. R318B—Myers Cog Gear Barrel Spray Pump

Complete with one lead of 15 feet of $\frac{1}{2}$ -inch 5-ply discharge hose, graduating Vermorel nozzle, and mechanical agitator for closed head barrel.

Price \$14.50

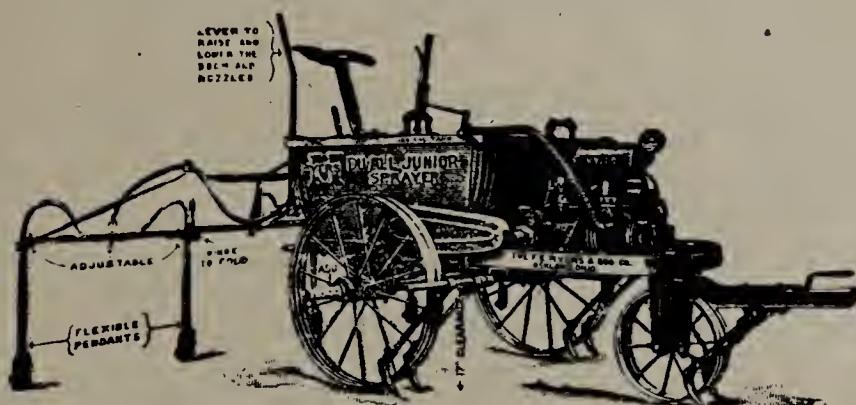
Net Cash Price \$13.78



Meyers Du-All Duplex Power Sprayers

These "Du-All" Sprayers are particularly adopted to be used by the average farmer who raises fruit, potatoes or other rowed crops, as the one rig serves all purposes.

To use as an orchard sprayer, remove the boom.



No. 1089 Du-All Junior with 150 gallon tank, self oiling double acting spray pump, 4 row spray boom with 12 nozzles, doubletree and neckyoke, 4 H. P. engine complete as shown. Price \$340.00.

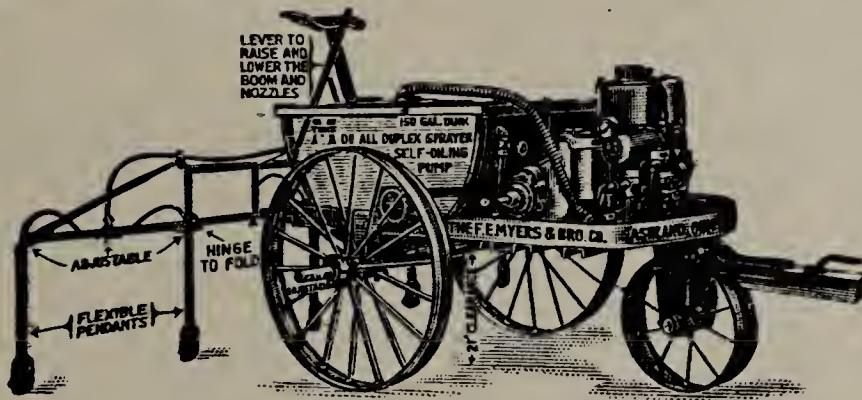
Net Cash Price \$323.00.

Extras for Du-All Sprayers.

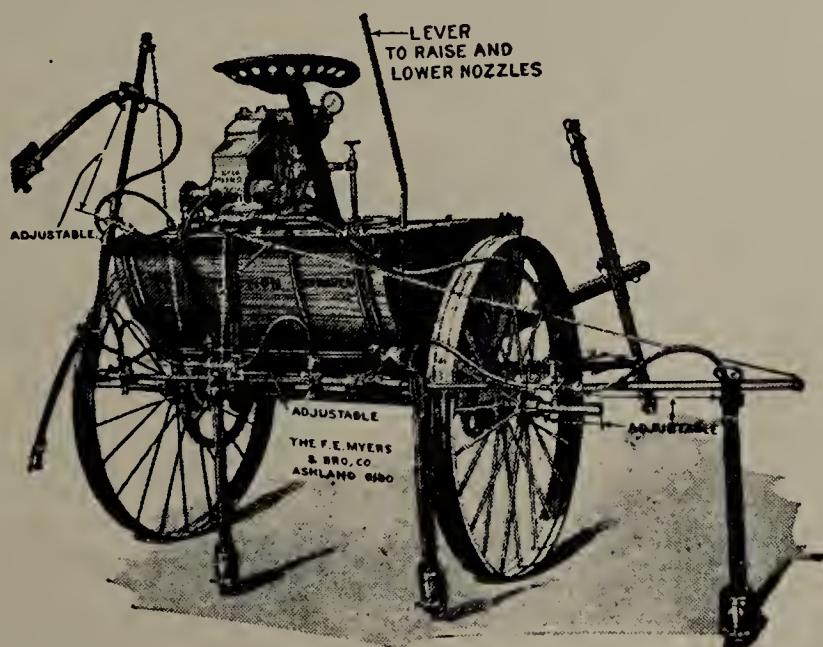
Orchard Attachment—Price \$21.50. Net Cash Price \$20.43.

Vine lifter with pin break hooks. Price \$32.00. Net Cash Price \$30.40.

Hydraulic Tank Filler. Price \$27.00 Net Cash Price \$25.65.



Myers Self-Oiling Traction Sprayer



Myers No. 1087 Traction Sprayer with 125 gallon tank, No. 707 triplex self-oiling pump, with clutch unloading pressure control valve, pressure gauge, gate valves. Myers 4 Row spray boom with 12 nozzles, doubletree and neckyoke complete. Price \$300.00.

Net Cash Price \$285.00

Dusting

The Modern Method Of Crop Protection

The rapid strides which the dusting method of crop pest control has made in the past four or five years is directly traceable to the efforts of the Niagara Sprayer Company. Its success, however, has come because it has done those things which were claimed for it, and brought results by the most direct route.

Dusts of infinite fineness have been perfected, containing those properties necessary to kill insect pests and prevent diseases. Not only do the Dusts do the work done by liquid sprays, but their development has opened new fields of Crop Pest Control.

Niagara Dusts are now being made that stick "through Wind and Rain," and exhibit toxic properties to many fungi and insects heretofore unequaled by either wet or dry materials.



Niagara Dusting Materials

POMO-GREEN. A fine green powder for the control of black spot and mildew, does not show up on the foliage.

1 lb. can 50c; 5 lb. pkg. \$1.75; carton (5-5 lb. pkgs.) \$8.00.

Nicotine Pomo-Green. 1 lb. can 75c; 5 lb. can \$3.00.

DORMANT DUST. (In metal drums 50 lbs. each). Delayed dormant dusting for San Jose scale, red mite and aphis on apples, pears, and shade trees. \$10.25 per drum.

KOLODUST. (In bags). A new dust developed by the Niagara Sprayer Co. It is sulphur fused with bentonite at high temperature and the product is koloized (a colloidal form). This produces a dust of infinite fineness much finer than 300 mesh, which experiment stations have proven more toxic to fungous diseases than any sulphur yet produced. \$5.50 per 100 lb. bag.

KOLOTEX. (In bags). A Sulphur Poison dust that will stick. The New Exclusive Niagara Sulphur Fungicide with Lead Arsenate. \$7.75 per 100 lb. bag.

KOLOKIL. (In bags). A Sulphur Heavy Poison Dust. \$8.25 per 100 lb. bag.

KOLOPEACH. (In bags). A Sulphur Small Poison content Dust suitable for dusting peaches and other stone fruits. \$6.50 per 100 lb.-bag.

A-1 MIXTURE. (In metal drums). A Contact Poison Dust. High percentage of quickly volatile nicotine fumes. 3% actual 100% nicotine. For aphids, red bugs, pear psylla, etc. The best contact dust for sucking insects, both out doors and greenhouses. \$13.00 per 100 lb. drum.

P. A. DUST. (In metal drums). Used same as A-1, contains 4% actual 100% nicotine. \$16.50 per 100 lb. drum.

VITIDUST. (In metal drums). Copper, Lime, Lead Arsenate. Mixture for grapes. \$7.50 per 100 lb. drum.

COPODUST. (In metal drums). A Copper-Lime Dust. The New Exclusive Niagara Copper Lime Fungicide for blights of potatoes, and other field crops. \$5.00 per 75 lb. bag; \$7.00 per 100 lb. drum.

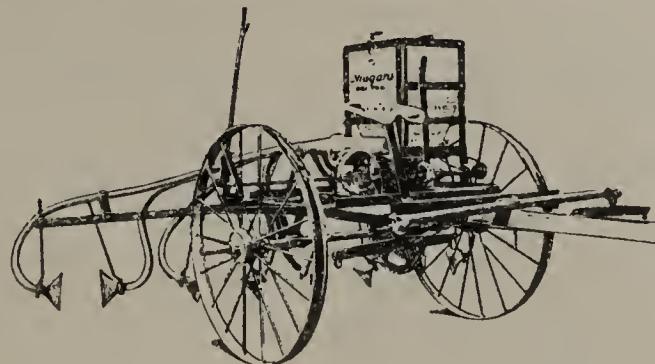
COPOTEX. (In metal drums). A Copper Lime Dust, with Poison added for potato bugs, etc. \$6.50 per 75 lb. bag; \$9.00 per 100 lb. drum.

WILDFIRE DUST. (In metal drums). A Copper Lime Dust for tobacco. \$5.00 per 75 lb. bag; \$7.00 per 100 lb. drum.

Above Prices Subject to 5 Per Cent Discount For Cash

NIAGARA DUSTING MACHINES

For Vegetable and Fruit Crops



The "Dri-Fog" Crop Duster (4 row, 8 nozzle or 6 row, 12 nozzle) is the most recent addition to Niagara's complete line of Dusts and Dusters.

This great crop duster is a new machine in every respect — in design, construction and performance.

Nothing has been overlooked that would simplify the crop dusting method, reduce the time and labor necessary for each job, reduce the cost and give the utmost efficiency in preventing ravages of pests and diseases.

HERE ARE THE REASONS WHY —

The "Dri-Fog" Crop Duster is the Superior of All Crop Dusters

1. It will govern accurately the poundage of material to be distributed, and feed this dust to the distributing system at the rate of 5 pounds to 110 pounds of Niagara Potato Dust per acre.

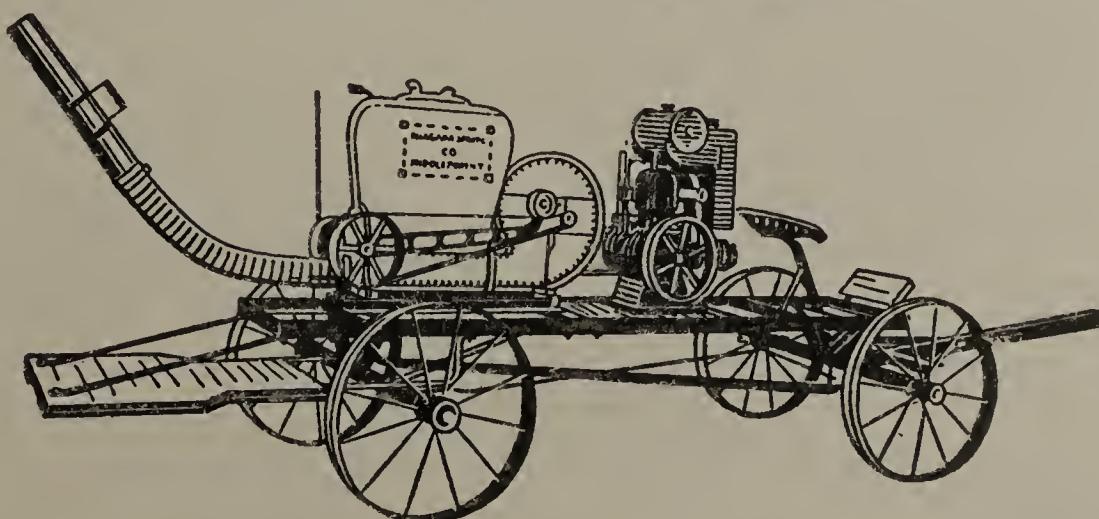
2. The distributor will divide this dust so that each side of every row will be covered with the same amount of dust.

3. The DRI-FOG is constructed so simply that all units are easily accessible for adjustment and repair.

4. The DRI-FOG is substantially built for operation on rough lands, yet so lightly built that it will not be another "horse-killer" on the farm.

5. More than anything else the DRI-FOG will develop air velocity and air volume to break up the dust and carry it in a penetrating cloud to all parts of the plants, so that every part will be covered with the same thickness of dust film.

Price \$250.00. Net Cash Price \$237.50.



Niagara Model F Fruit Duster mounted on truck equipped with a 6 to 10 H.P. Twin New Way engine or 6 H.P. two cylinder Novo engine. Prices on application.

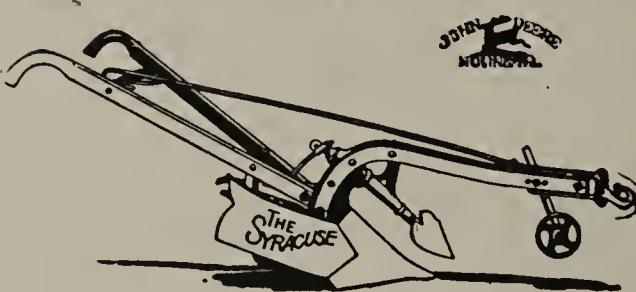


Niagara Blower Gun Crank Type,
Brush Feed, Price \$13.50 Net Cash
Price \$12.83.

2 row "Y" attachment, Price \$1.50 net.

Niagara Hand Plunger Gun, Price
\$1.00 net.

**JOHN DEERE-SYRACUSE NO. 821 SERIES TRUSS
STEEL-BEAM HILLSIDE PLOWS**



Ample throat room and close-fitting joints prevent clogging. Choice of white iron or tempered steel moldboard adapts them to a variety of soils. Steel and malleable iron give maximum strength and unusual light weight. Two-piece truss-style beam is extra sturdy. Renewable shoe protects standard and serves as landside.

Price on application.

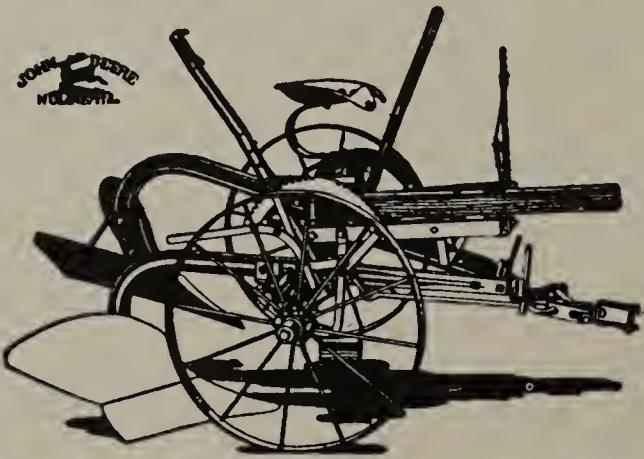
**JOHN DEERE-SYRACUSE NO. 31-32 SERIES
WALKING PLOWS**

The moldboard of hardened soft-center steel is formed so that a furrow may be turned smoothly up or down on sloping land. This feature makes Syracuse plows of this series popular in sections where the land is somewhat rolling.

Steel landside of extra height, furnished with a cast shoe which can be renewed at slight expense.

Prices on application.

JOHN DEERE NO. 4 TWO-WAY PLOW



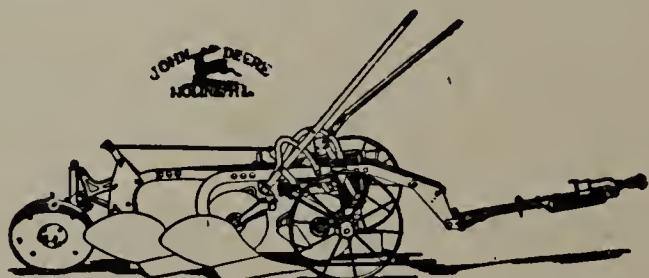
Ideal for plowing hillsides, irregular fields or irrigated land. Leaves no dead furrows or back ridges. Unnecessary to lay out lands. You can begin at one side of the field and plow back and forth until you reach the other side, turning all the soil one way. Special features make this the easiest plow to control you ever saw. Get on the seat and try it. Sizes: 12-, 14- and 16-inch.

Prices on application.

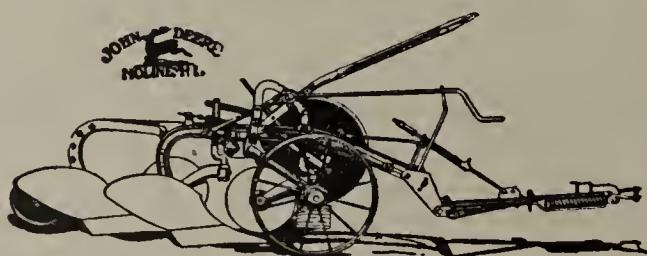
JOHN DEERE NO. 45 TRACTOR PLOW

A light-weight, light-draft plow built for use with any "two-plow" tractor. Beams of special hard and tough John Deere steel are unusually strong. Frame connections hot-riveted. John Deere steel or Syracuse bottoms to suit your soil. Quick-detachable shares. Simple, positive power lift—plow rises high and level on all three wheels. Hitch has wide range of adjustment up and down and to the side. Cushion spring release hitch protects both plow and tractor.

Price on application.



JOHN DEERE NO. 4 TRACTOR PLOW

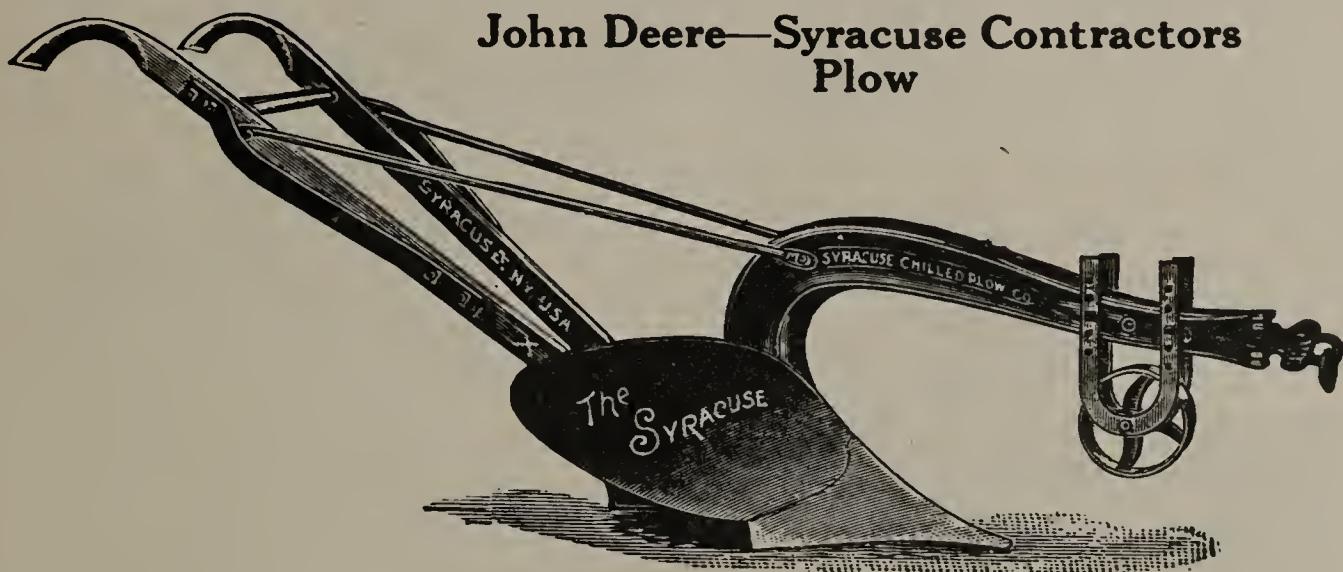


beams to share-points insures freedom from clogging. Rolling landside carries rear weight on greased bearing—no dragging landside friction. Furnished with 12-, 14- or 16-inch bottoms. For any farmer operating a "two-plow" tractor, the No. 4 is a mighty satisfactory plow.

Prices on application.

The strongest two-bottom tractor plow ever built. Beams, beam-bracing and other important parts are of the same great strength as similar parts built into larger John Deere tractor plows. Heavy-duty, constant power lift raises bottom to a constant height regardless of depth of plowing. 23-inch clearance from

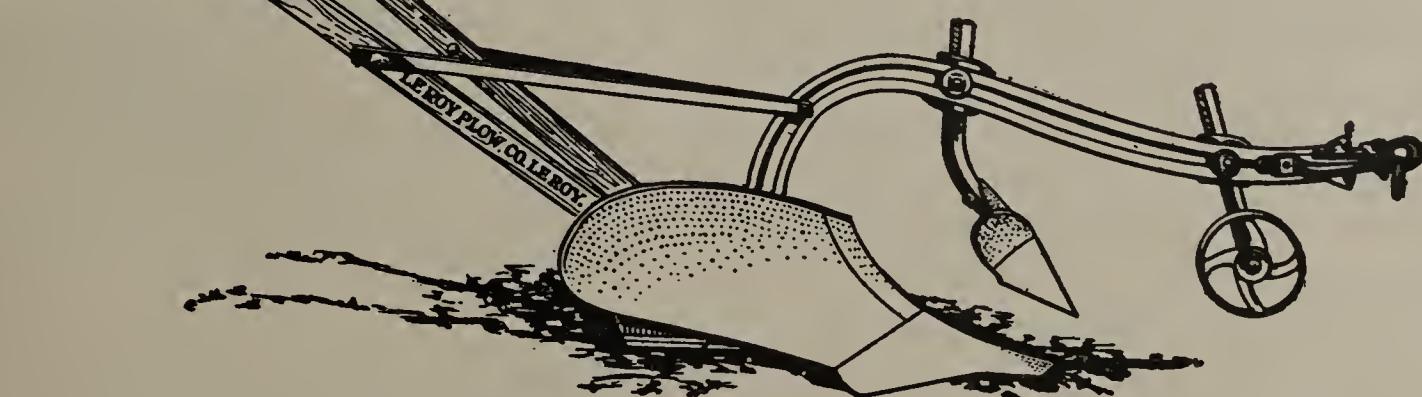
**John Deere—Syracuse Contractors
Plow**



The No. 1 turns furrows 5 to 9 inches deep and 12 to 15 inches wide. Built to stand the strain — extra heavy beam, share and landside, steel wheel frame, loop handle wear irons.

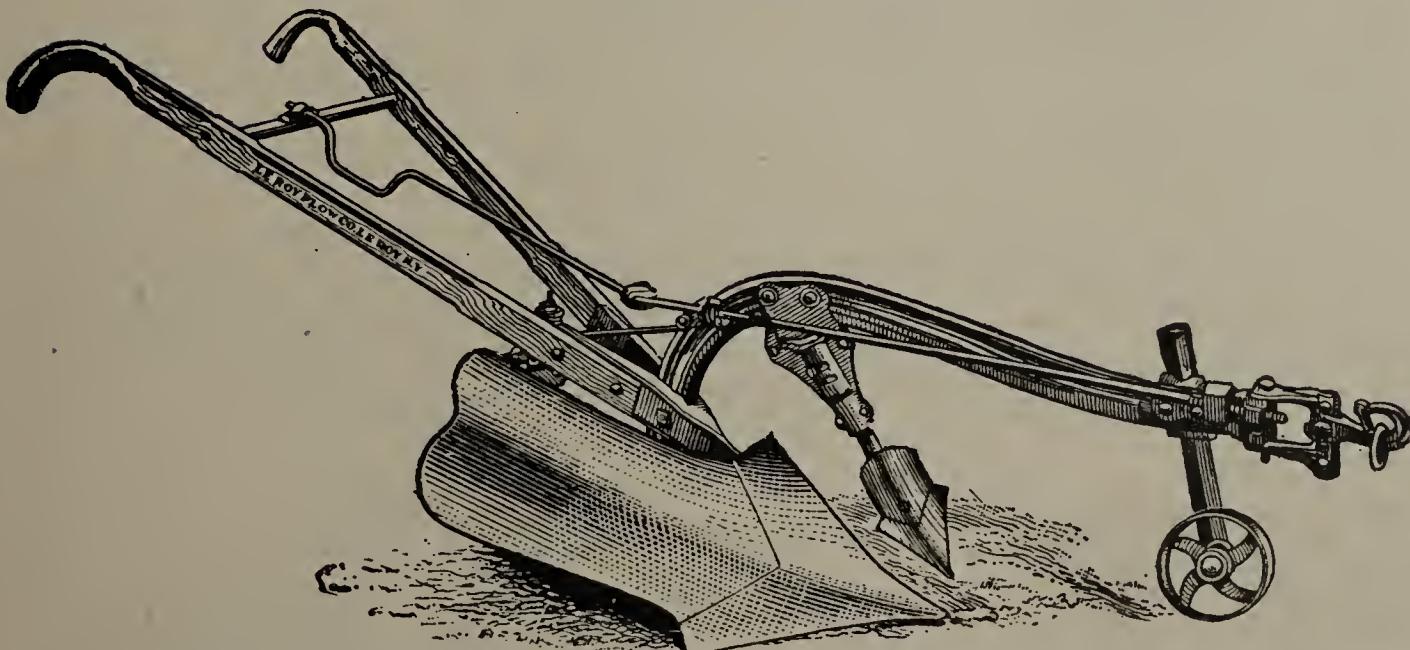
Price on application.

Leroy Plows



No.	Style	Furrow	Weight
107	One horse	4" to 6" deep, 6" to 11" wide	90 lbs.
108	Light 2-horse	4" to 6" deep, 9" to 12" wide	115 lbs.
109	Medium 2-horse	5" to 7" deep, 10" to 13" wide	120 lbs.
110	Large 2-horse	5" to 8" deep, 11" to 15" wide	125 lbs.

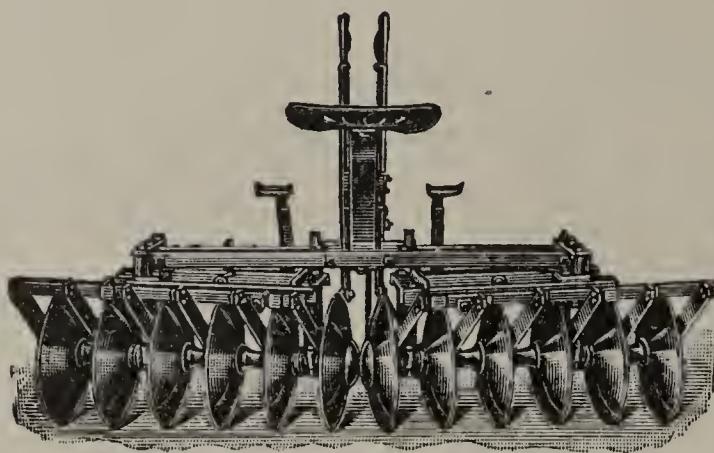
Prices on application.



No. 30 — Capacity, 5 to 8 inches deep, 10 to 14 inches wide. Weight, plain, 110 lbs. Full rigged with jointer and shifting clevis as pictured. Weight, 165 lbs.

Price on application.

Disc Harrows



OHIO — 12 — 16 Single Action

The construction of this Harrow is of the very best. It is all steel even the stub pole.

With Pole or Foretruck and 2 Horse Evener.

Price on application.

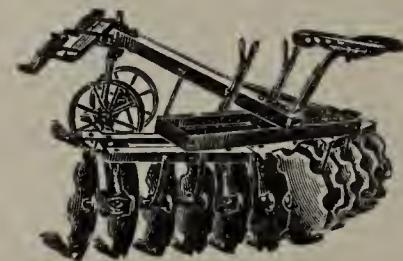
CLARK CUTAWAY Single Action

The Clark "Cutaway" single action harrow is reversible, that is, the gangs can be swung end for end, so that the soil may be thrown either out or in.

8-16" discs one horse with shafts.

12-16" discs with Pole or Foretruck, and 2 Horse Evener.

Price on Application



JOHN DEERE MODEL B

Extremely flexible, penetrates, pulverizes and packs the soil its entire width. Each gang works independently — one gang can pass over obstructions without lifting the other from its work.

12-16" discs with Foretruck or Pole and 2 Horse Evener.

Price on application.

JOHN DEERE MODEL L FOR TRACTOR

Front and rear sections are angled by independent cranks convenient to tractor operator, without backing or stopping harrow. Automatic yielding lock coupling, an exclusive feature, compels rear discs to cut ridges left by front gangs.

24-16" discs 6 ft. cut.

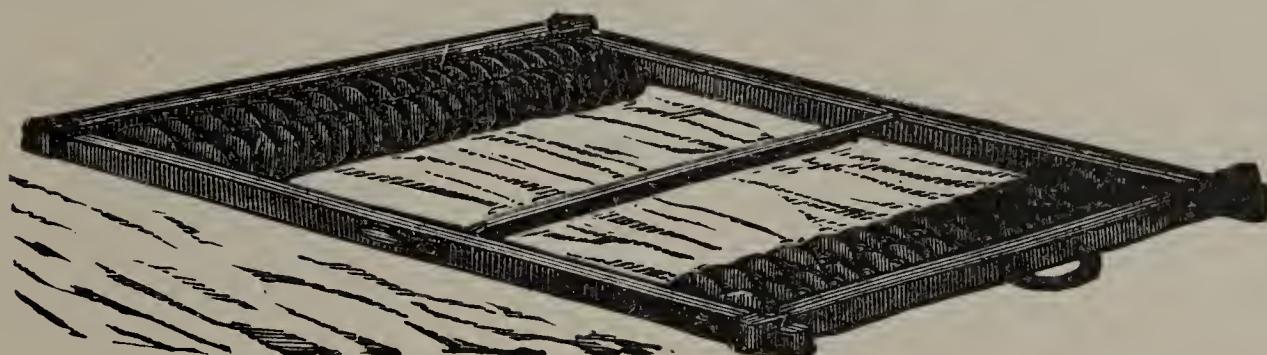
28-16" discs 7 ft. cut.

32-16" discs 8 ft. cut.

Prices on application.



Meeker Smoothing Harrow



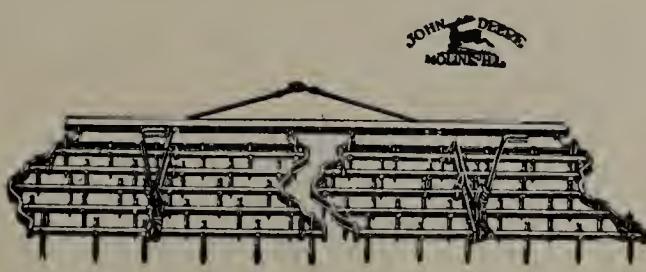
A perfect harrow and land roller combined. This harrow has become a great favorite among all classes of farmers and market gardeners.

It has four (4) sets of rollers containing 58 steel discs. These discs grind all lumps and save the work of raking and also mash small stones below the surface better than any field roller, leaving the land smooth and level.

6 ft. x 6 ft. 6 in. (for horses) or 8 ft. x 6 ft. 8 in. (for tractor) with 10 inch discs.

Price on application.

John Deere Universal Steel Lever Harrow



The Universal is the ideal spike-tooth harrow for orchard or vineyard work because the end rails prevent the tooth bars from catching on trees or vines. A spring relief on each lever permits the harrow teeth to pass over roots, stones, or other obstructions without being damaged.

We can furnish the Universal in one, two, three, and four sections, with either 25 or 30 teeth to the section.

Prices on Application.

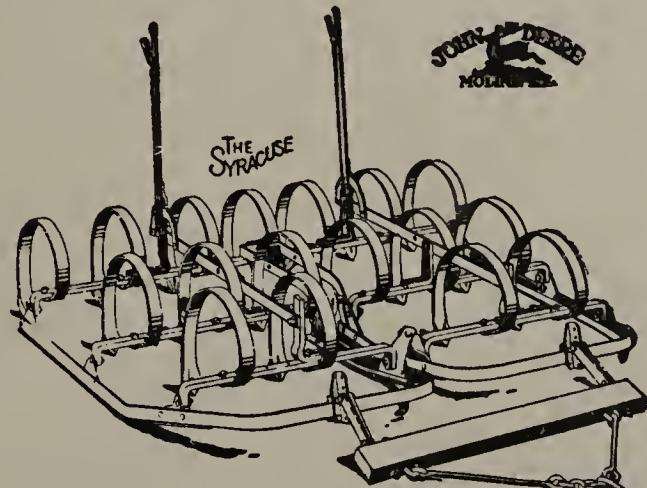
Syracuse Spring Tooth Harrow

Its special-process, *heat-treated* spring-steel teeth penetrate to a greater depth than any other type of harrow teeth. They tear out the weeds and leave the field smooth. The teeth are securely *clipped* to the tooth-bars — no bolt holes to weaken them.

There are no delays due to clogging when you use one of these harrows — frame is designed so that weeds and trash work out through openings between the sections.

We can furnish any number of sections you desire; also tractor hitch if you want it.

Prices on application.



Acme Pulverizing Harrows



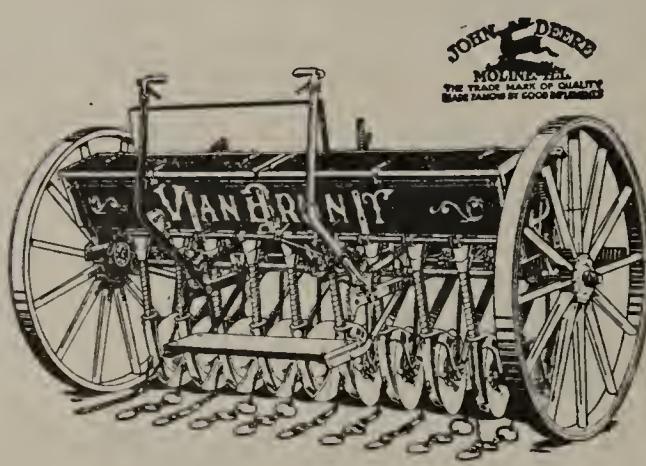
No. 8 — 4 ft. 4 in. cut for 1 horse (one section).

No. 12 — 6 ft. 6 in. cut for 2 horses (one section).

No. 12F — 6 ft. 6 in. cut for 2 horses (two section).

No. 16F — 8 ft. 6 in. cut for 2 horses (two section).

Prices on application.



John Deere-Van Brunt Disc Fertilizer Drill With Grass Seed Attachment

Distributes any standard fertilizer and plants grain at the same time — also grass seed, when attachment is used; or it will handle any one of the three alone. All feeds can be thrown out of gear and discs used for stirring soil without seeding or fertilizing. Each wheel drives half the feeds, insuring positive and steady operation. One-half of grain feeds can be used for finishing a field or seeding narrow places. Van Brunt Adjustable Gate Force-Feed is one of the best seeding devices made. Drill handles fertilizer in quantities from 65 to 1250 pounds per acre. Plants wheat, oats, barley, flax, rye, rice, alfalfa, peas, beans, corn, etc.

Size 11 x 7 furnished regularly with 1-pole and 2-horse evener.

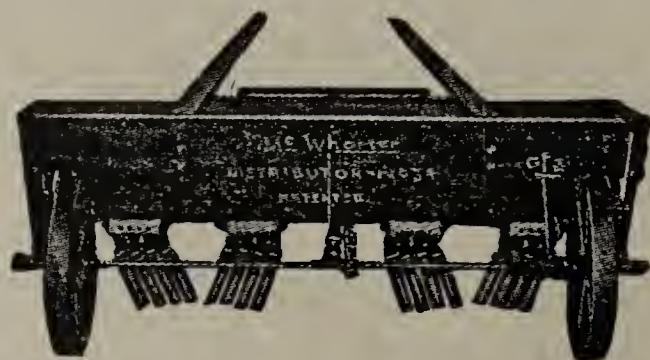
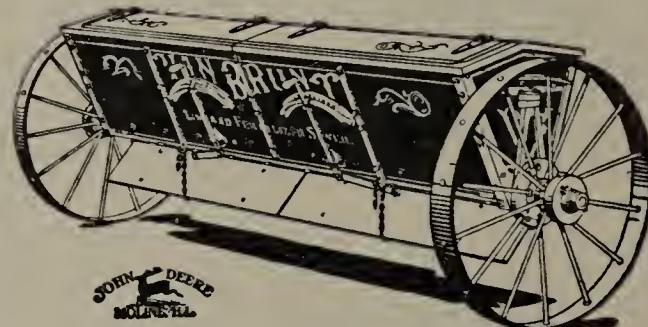
Complete with grass seed attachment. Price on application.

John Deere-Van Brunt Lime and Fertilizer Sower

Covers 8 feet of ground; carrying capacity 10 bu. Direct wheel drive — each wheel drives half the machine.

One of the best features of this sower is the simple feed control which enables you to distribute crushed lime rock, commercial fertilizers, and other materials in quantities from 150 to 8,000 pounds per acre. Half of the mechanism can be disengaged for sowing narrow strips.

Price on application.



McWhorter Fertilizer Sowers

No. 34 shown in the cut is a low-down type machine, which is intended for use with one horse. It can be used for broadcast or between the row sowing.

No. 26 is a two-horse machine, equipped with six sets of spouts, with a hopper capacity of 540 lbs., the extreme width is 9 ft.

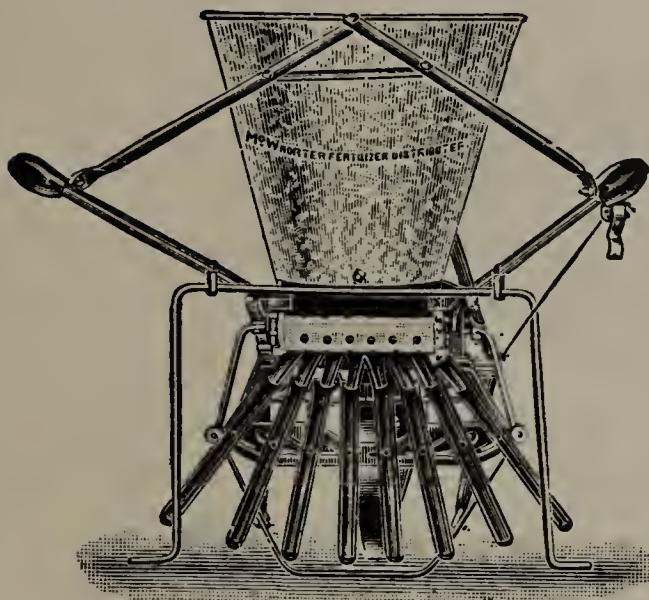
Prices on application.

Nonpareil Broadcast Fertilizer Sowers

Specifications

Name	Capacity	Weight	Width Sown
Special Sower	15 bu.	435 lbs.	8 feet
Standard Sower	10 bu.	351 lbs.	8 feet
Orchard or One Horse Sower	10 bu.	361 lbs.	5 ft. 3 in.

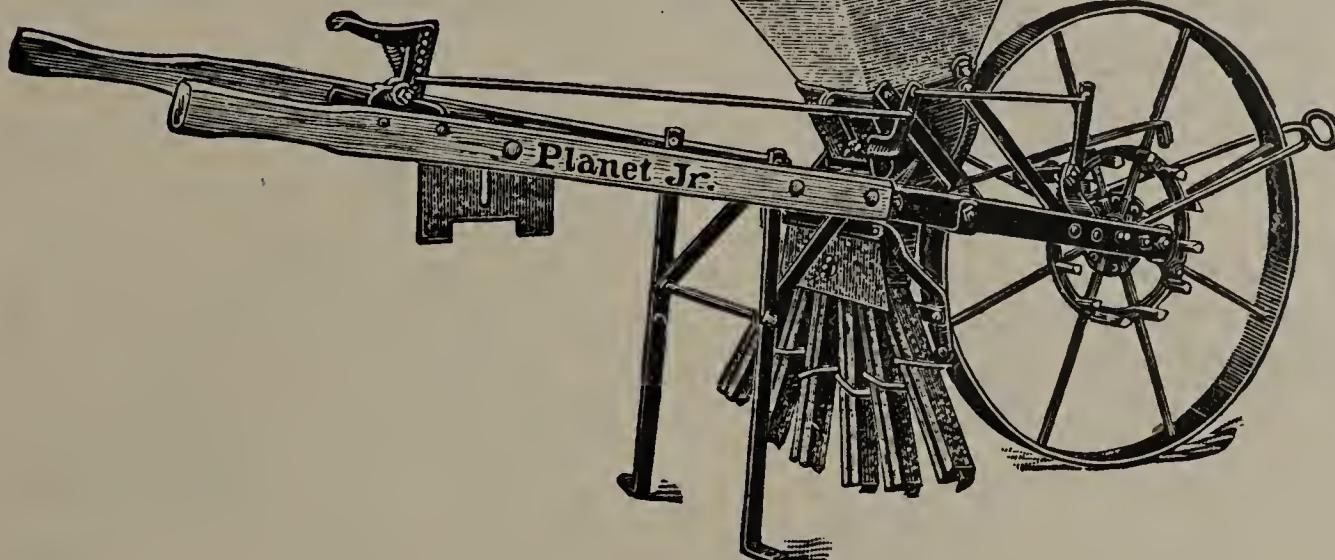
Prices on application.



No. 21 McWhorter Wheelbarrow Sower

This machine has the same positive belt feed as used on the larger McWhorter Sowers. Sows any quantity from a few pounds up to forty to the hundred yards of row, or from 200 lbs. to a ton per acre. Price \$21.00. Net Cash Price \$19.95.

Planet Jr. Between the Row Sower



Planet Jr. No. 220 Fertilizer Distributor will distribute fertilizer in the middles of three rows 12 to 14 inches apart; it will side-dress one side each of two rows up to 36 inches apart (one complete row; and corn in wider rows). You can use it in very narrow rows — as close as 9 inches.

Price \$26.00. Net Cash Price \$24.70.

Nos 230 and 230-A Fertilizer Distributor and Cultivator

These machines are great time and labor savers.

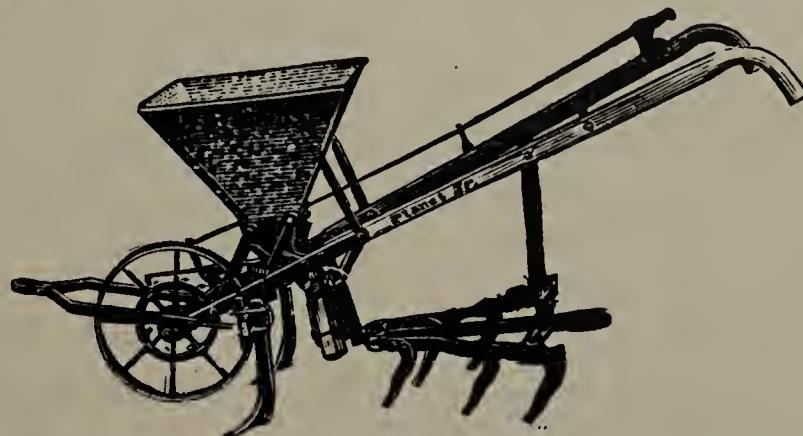
The one machine does three operations at once. It opens the furrow next to the row, puts fertilizer in it and then stirs it thoroughly into the soil.

This results in an absolute economy of fertilizer as none is lost through blowing away or leaching.

This new and improved method of applying a wide strip of fertilizer between the rows and thoroughly mixing with soil in one operation has the advantage of making the fertilizer available sooner, prevents loss and saves all the time usually consumed by a cultivation to work the fertilizer in.

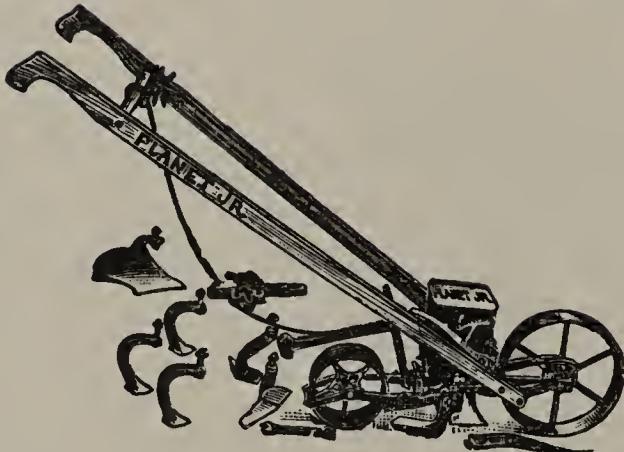
The two-wheel machine, No. 230-A is recommended for flat land work and the one-wheel for irrigated sections.

No. 230 Price \$35.00. Net Cash Price \$33.25.
No. 230A Price \$37.50. Net Cash Price \$35.63.



Planet Jr.

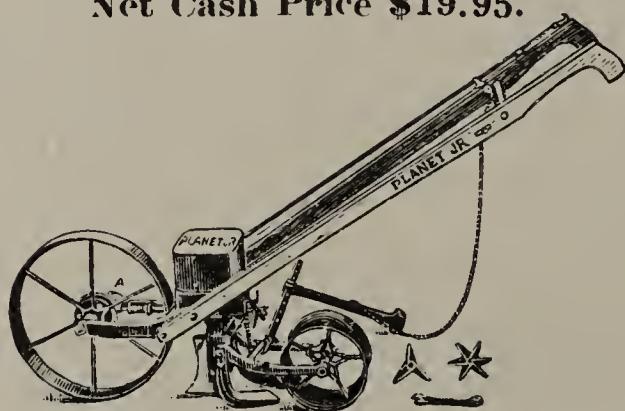
Seeders



No. 25 Planet Jr. Combined Hill and Drill Seeder, Double and Single Wheel Hoe, Cultivator and Plow. Has long been known as the "Complete Gardener".

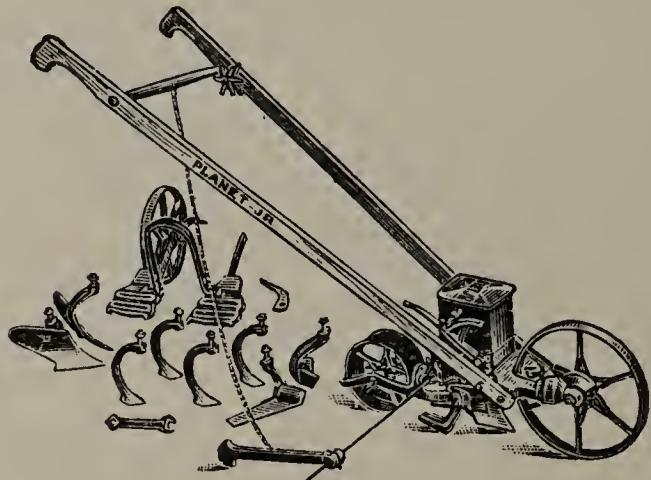
Price \$21.00.

Net Cash Price \$19.95.



No. 4 Planet Jr. Combined Hill and Drill Seeder, Single Wheel Hoe, Cultivator and Plow. Very popular with owners of small gardens. Price \$16.75. Net Cash Price \$15.92.

No. 4D (seeder only). Price \$13.50. Net Cash Price \$12.83.



No. 3 Planet Jr. Hill and Drill Seeder. For Market Gardeners, Onion Raisers and other large growers. Holds 3 qts.

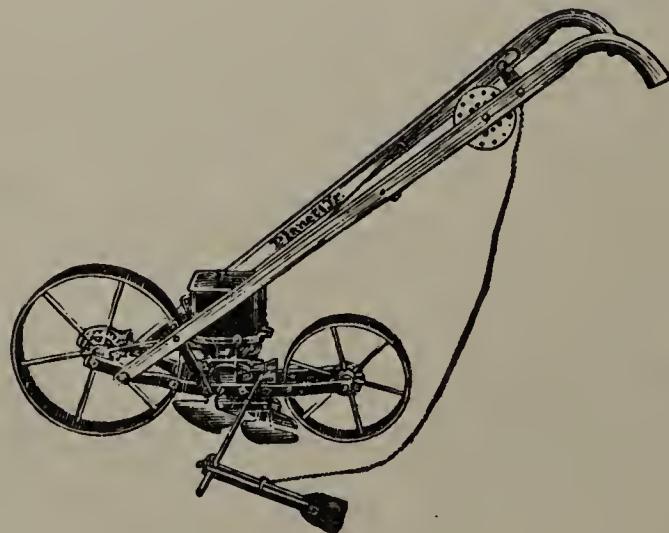
Price \$16.50.

Net Cash Price \$15.68.

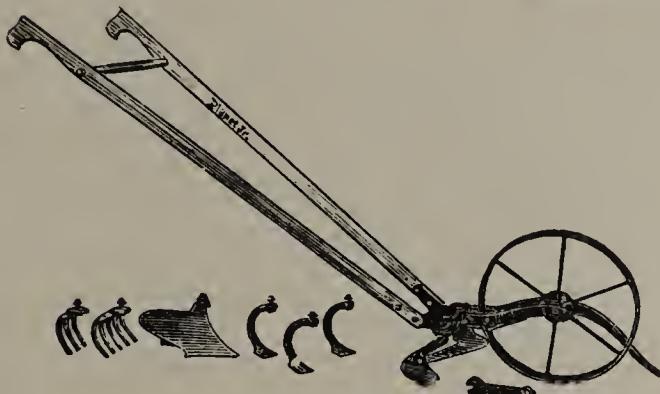
No. 300-A Planet Jr. Drill Seeder. There has always been a demand for a quality seeder which will sow through holes in a plate rather than through a variable diamond-shaped opening.

In response to this demand we present the No. 300-A Drill Seeder. It is designed primarily for use on light muck soil but so sturdily is it built that it is equally satisfactory on heavy loam or clay soils. Capacity 4 qts.

Price \$18.75. Net Cash Price \$17.82.



Planet Jr. Single Wheel Hoes



No. 16. Equipment (as shown): One pair of 6" hoes, three cultivator teeth, one garden plow, one 7" rake, one 4" rake, one leaf guard.

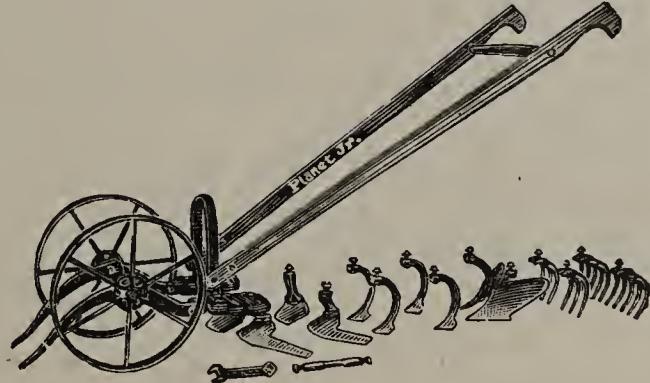
Price \$8.50. Net Cash Price \$8.08.

No. 17 Equipment—one pair 6 in. hoes, three cultivator teeth, one plow. Price \$7.35. Net Cash Price \$6.99.

No. 17 1/2 Equipment—one pair 6 in. hoes, three cultivator teeth. Price \$6.40. Net Cash Price \$6.08.

No. 18 Equipment—one pair 6 in. hoes. Price \$5.50. Net Cash Price \$5.23.

Planet Jr. Double and Single Wheel Hoes Combined



No. 11. Equipment (as shown): One pair 6" hoes, one pair 4 1/2" hoes, four steel cultivator teeth, one pair plows, two three tooth rakes, two five tooth rakes, two leaf lifters.

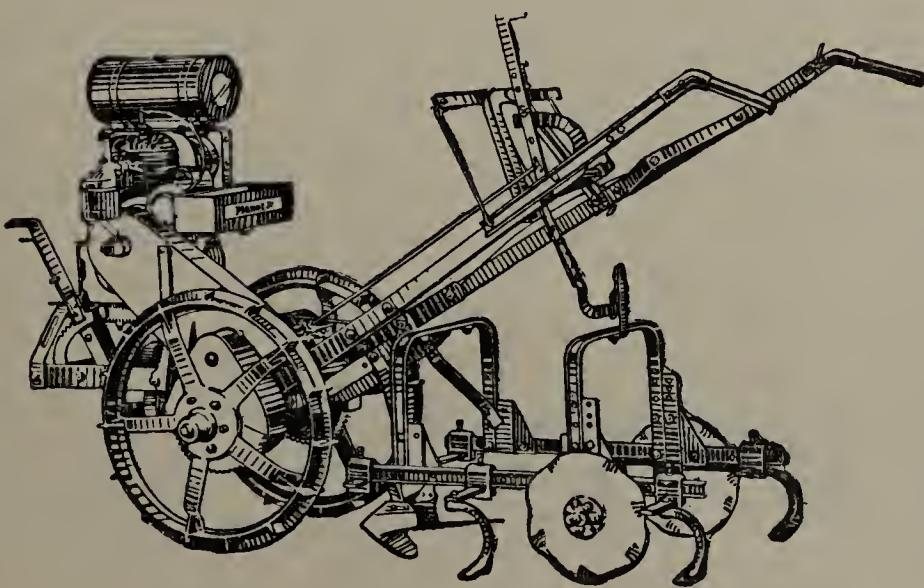
Price \$13.00. Net Cash Price \$12.35.

No. 12 Equipment—one pair 6 in. hoes, four cultivator teeth, one pair plows. Price \$10.25. Net Cash Price \$ 9.74.

No. 13 Equipment—one pair 6 in. hoes. Price \$7.60. Net Cash Price \$7.22.

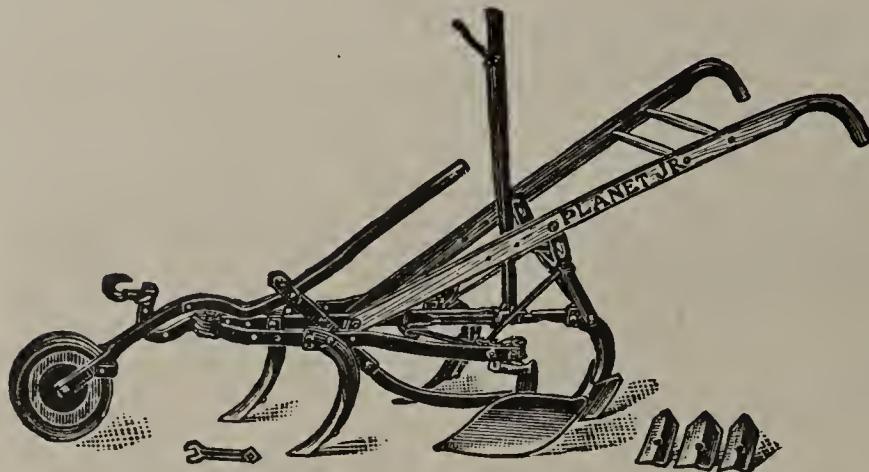
Planet Jr. Motor Cultivator

The Planet Jr. Motor Cultivator is built to do a wider range of work, to do more work with less effort on the part of the operator, to do faster, closer cultivation and to afford greater economy.



The primary purpose of such a tractor is cultivation of narrow row crops such as beets, carrots, onions, etc. Many farmers and home owners with extensive gardens, however, wish to do a wider range of work from light plowing to horse cultivation in wide rows. The Planet Jr. has been made heavy enough and powerful enough to do this work in a very efficient manner. It handles a six-inch plow easily.

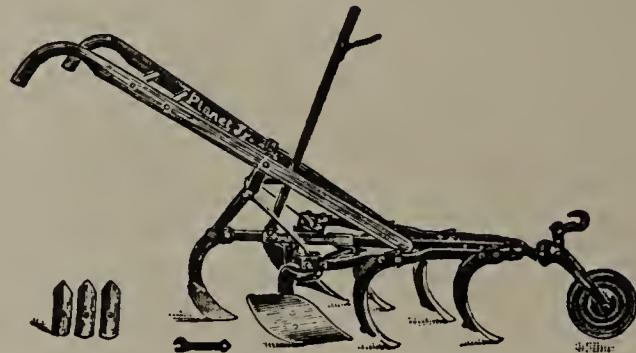
Price on application.



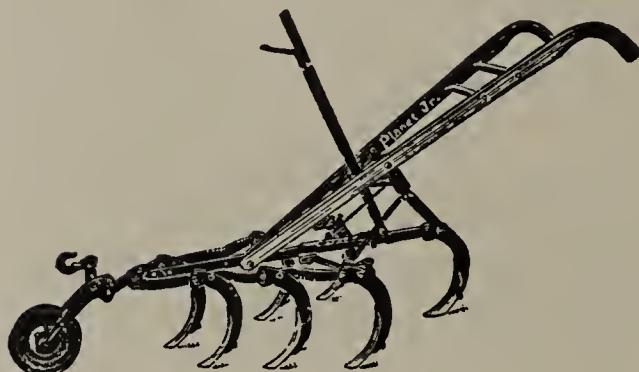
No. 8 Planet Jr. Horse Hoe and Cultivator. Equipment (as shown): Four 3 x 8 in. cultivator steels, one 4 x 8 in. cultivator steel, two 6 in. hillers, one 7 in. shovel, lever wheel, lever expander and depth regulator. Price \$14.70. Net Cash Price \$13.97.

No. 7 Planet Jr. Horse Hoe — Same as No. 8 but has no depth regulator. Price \$14.20. Net Cash Price \$13.49.

No. 9 Planet Jr. Horse Hoe — Identical with No. 8 except that it has a plain wheel instead of a lever wheel; and is without depth regulator. Price \$12.75. Net Cash Price \$12.12.



No. 82 Planet Jr. Horse Hoe and Cultivator Combined. Equipment (as shown): Seven 2 1/4 x 8 in. cultivator steels, one pair 6 in. hillers, one 7 in. shovel steel, lever expander. Can be equipped with lever wheel. Price \$14.25. Net Cash Price \$13.54.



No. 90 Planet Jr. Twelve-Tooth Harrow, Cultivator and Pulverizer (as shown).

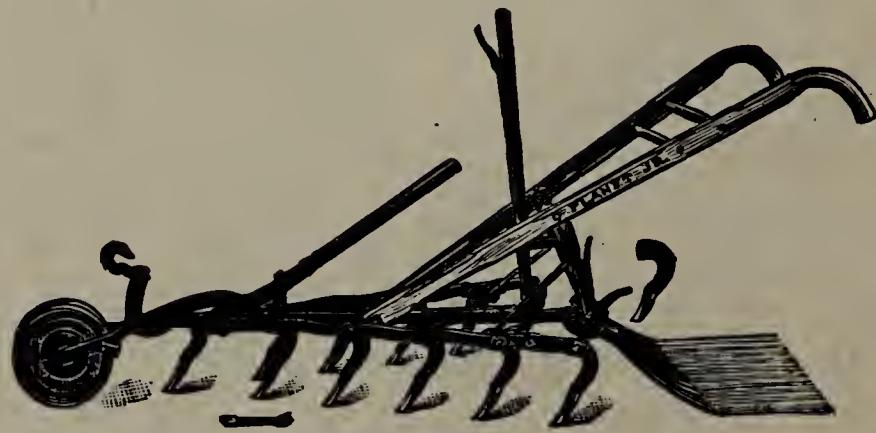
The teeth are 1 1/4 inches wide and wear well, being specially hardened. By using the lower hole, the teeth may be set to slant backwards for breaking the crust before the weeds begin to grow. Price \$15.50.

Net Cash Price \$14.73.

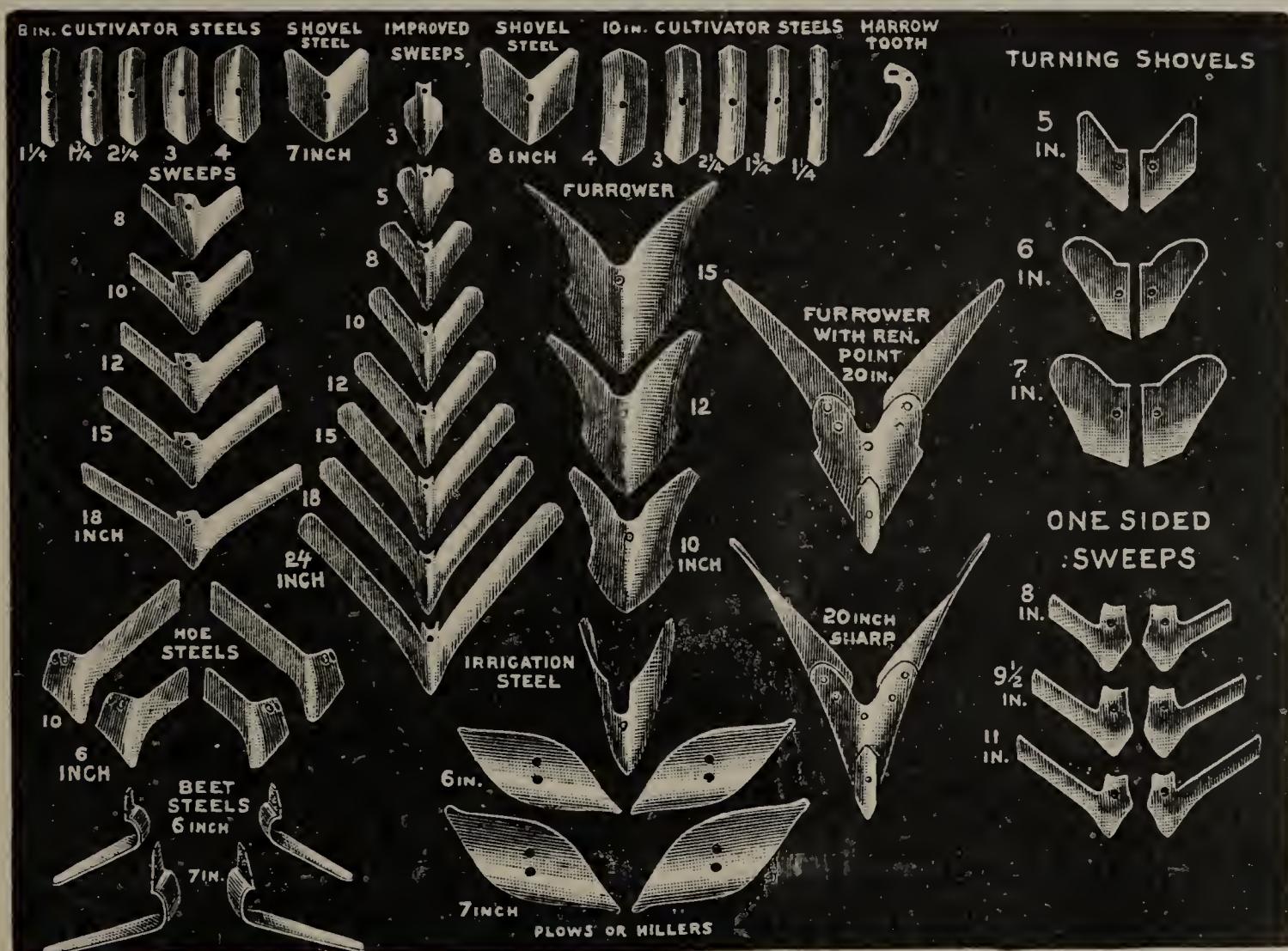
No. 90B. Less Pulverizer.

Price \$12.75.

Net Cash Price \$12.12.



No. 83 Planet Jr. Seven Tooth Plain Cultivator. Equipment (as shown): Seven 2 1/4 x 8 in. cultivator steels, lever expander. Is the most profitable one-horse cultivator to use. The seven teeth make possible finer cultivation than can be had with a five-tooth cultivator. Can be equipped with lever wheel. Price \$12.75. Net Cash Price \$12.12.

“PLANET JR.”**Varieties of Steel Plates made for the “Planet Jr.” Horse Hoe.**

The $1\frac{1}{4}$ inch steels throw almost no furrow, and run very deep, yet work beautifully as cultivating teeth and subsoilers, very desirable where the soil is to be broken up thoroughly without hillling, as where the ground is clean, but beaten down by rains, or baked by the sun. The next two sizes, $1\frac{3}{4}$ and $2\frac{1}{4}$ inch, are desirable for general cultivation, and do superior work in hard lands. The next is 3 inch; this is the size, with one 4 inch for the rear standard, which is sent out with the Horse Hoe, unless otherwise ordered, being best adapted to general work in all kinds of soil.

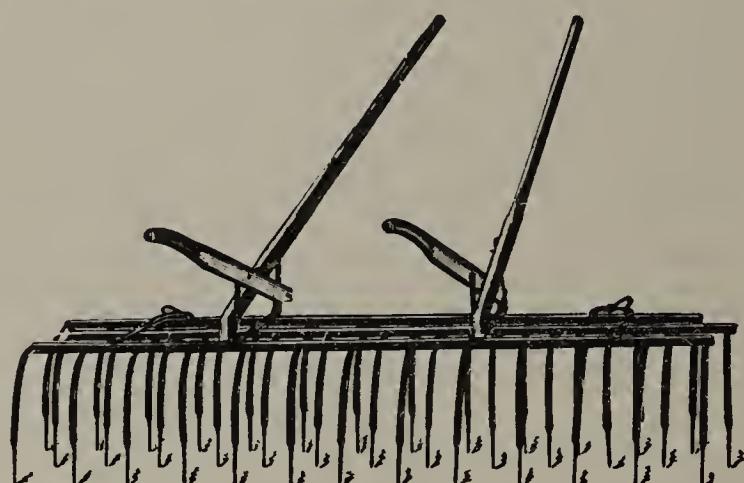
$1\frac{1}{4}$ x 8 inch Steels,	\$0 .16	12 inch Improved Sweeps,	\$0.75
$1\frac{3}{4}$ " " " . . . . .	.17	15 " " " " . . . . .	.90
$2\frac{1}{4}$ " " " . . . . .	.18	18 " " " "	1.20
3 " " " . . . . .	.20	24 " " " "	2.50
4 " " " . . . . .	.25	6 inch Hillers, . . . . .	.60
7 " Shovel Steel, . . . . .	.30	7 " " " " . . . . .	.75
8 " " " " . . . . .	.85	6 inch Hoe Steels, . . . . .	.60
Bolts, 5¢ each, 50¢ doz.		10 " " " " . . . . .	.70
8 inch Sweep (regular) . . . . .	.40	10 " Furrower, . . . . .	.95
10 " " " . . . . .	.45	12 " " "	1.25
12 " " " . . . . .	.50	15 " " "	1.65
15 " " " . . . . .	.65	20 " Furrower, old style,	3.00
18 " " " . . . . .	.80	with wings	
24 " " "	1.85	20 " Furrower, new style,	3.00
8 inch Improved Sweeps, . . . . .	.50	with wings	
10 " " " " . . . . .	.60	Pulverizer for Harrow Special,	3.75

Improved Sweeps do not fit Horse Hoe Side Standards.

Hallock Pattern Weeder

A Standard Weeder having curved teeth.

Price \$16.00.
Net Cash Price \$15.20.



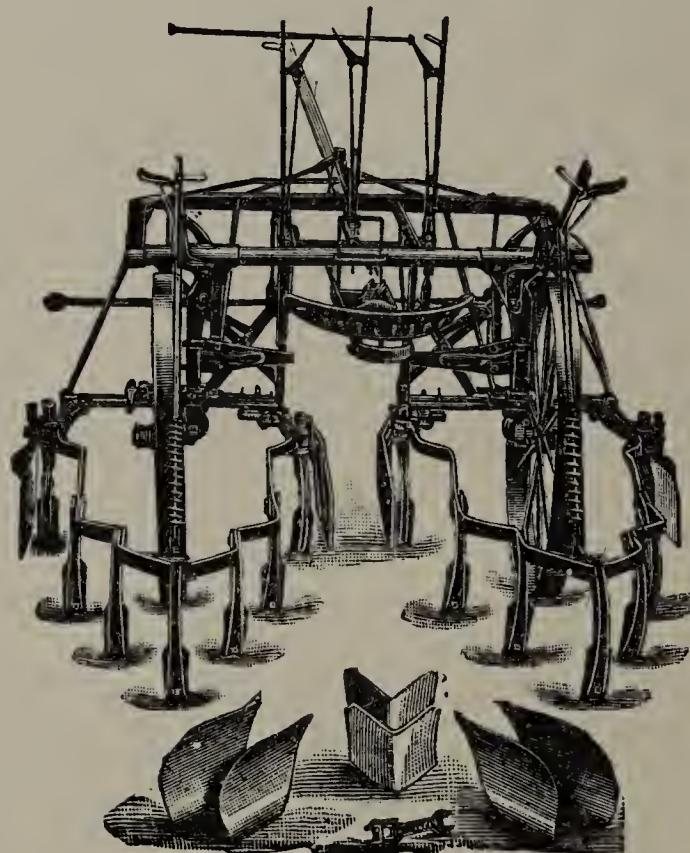
Planet Jr. Pivot Wheel Cultivators

The No. 72 as shown has five levers, and they simplify its control so that a boy can operate it with success. The center lever adjusts the hinged tongue regulating the depth of the front teeth and leveling up the machine to suit all heights of neck yoke. The outside levers regulate the depth of the teeth in the rear, while intermediate levers are used in changing the widths of the gangs to suit irregular planting without stopping the team.

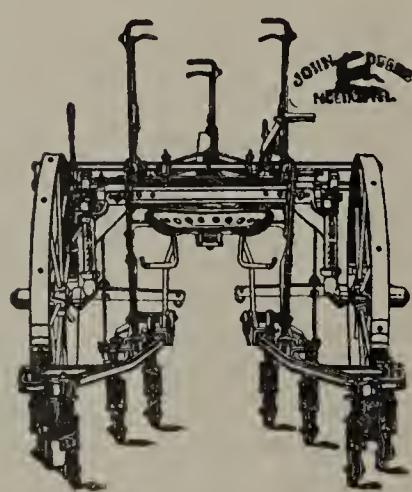
Price \$91.25
Net Cash Price \$86.69

The No. 76D Single row works rows 28 to 48 inches apart. The gang frames are extra heavy, but improved levers with lifting and depth regulating springs make for easy, perfect control.

Price \$67.50
Net Cash Price \$64.13



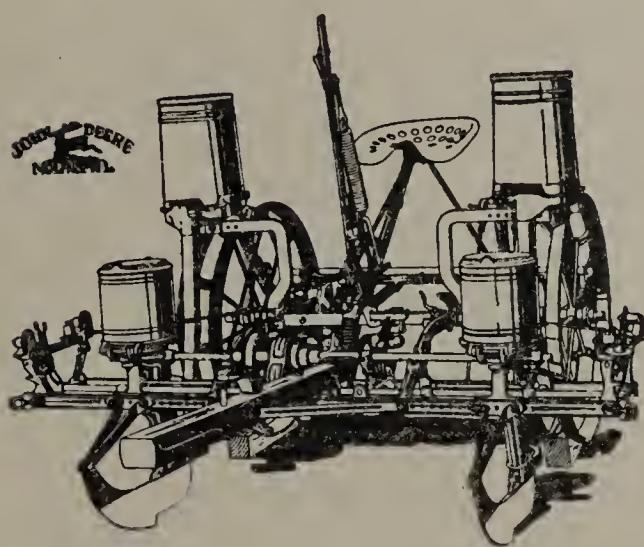
JOHN DEERE KL CULTIVATOR



Especially designed for use in narrow or wide rows. Wheel track quickly adjustable to cultivate rows from 30 to 48 inches wide. Rows as narrow as 28 inches can be cultivated by removing one shank from each rig and setting gangs close. Easy control to meet all field conditions by means of master lever, independent depth levers, tilting lever and spacing lever. Quick dodge—pedal guide pivots wheels and shifts rig. Open framework through center gives good view of work ahead of shovels. Strongly built—frame does not sag; wheels do not spread.—Great variety of rig styles to meet conditions in every section of the country.

Prices on application.

JOHN DEERE No. 999 CORN PLANTER



Widely recognized as the most accurate planter on the market. The John Deere Natural Cell-Fill, Edge-delivery seed plates, sloping hopper bottom, improved metal cut-off and knocker insure positive feed and unfailing accuracy. Plants accurately whether the hopper is full or nearly empty. Seed plates for handling every kind of corn; also beans, and many other seeds. Variable drop plants two, three or four kernels in each hill as desired. The number of kernels per hill can be varied merely by shifting foot lever, without stopping the machine. Also varies the distance in drilling. Easy to

change from hilling to drilling. Underhung reel; a touch of the toe releases check wire, fertilizer can be checked with each hill or drilled along the row.

Price on application.

King of the Cornfield Corn Planter

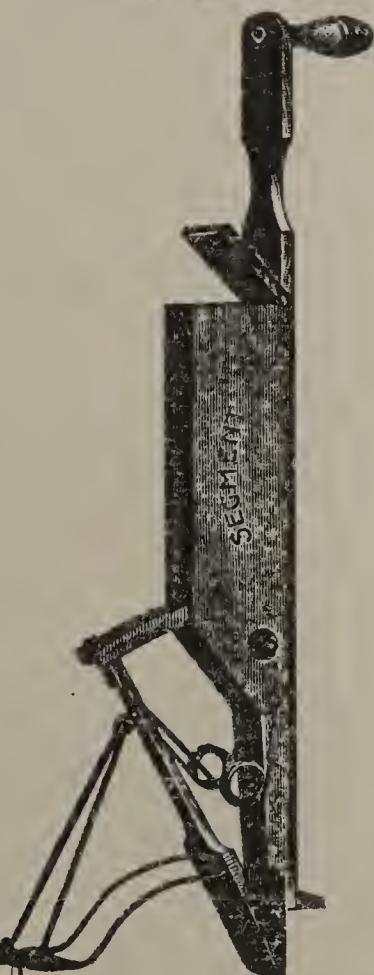


This light-draft Planter is adapted to every requirement and easily operated with one horse. Suitable seed-plates are furnished for dropping corn, beans, peas, beets, and similar seeds. The seed-dropping device is absolutely positive and cannot miss or skip hills spaced $4\frac{1}{2}$, 9, 12, 18, 24, 36, or 72 inches apart. The seed-box is made with two compartments, permitting two kinds of seed to be dropped alternately, such as corn and beans or other seeds. The fertilizer hopper is made of galvanized iron and so arranged that the seeds do not come in direct contact with the fertilizer.

Price \$43.00. Net Cash Price \$40.85.

Crow Repelant. "Crocus." One pint treats 2 bu. Corn. A small cost to insure Corn against the depredations of crows pulling the seed. Price 1 pt., \$1.00.

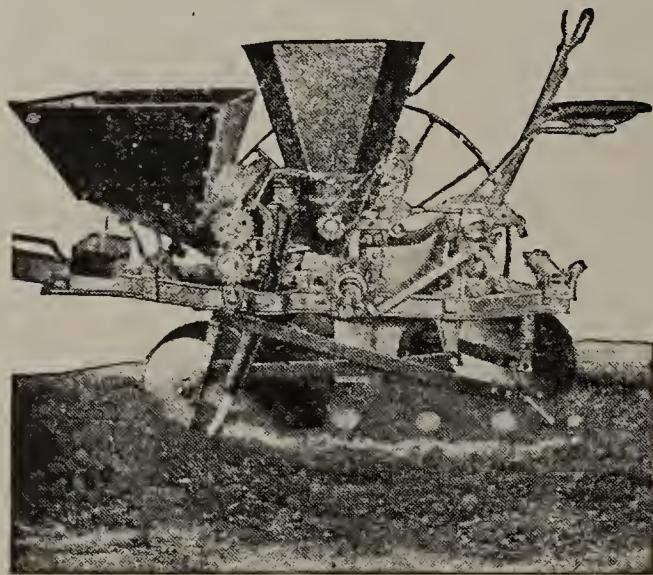
The Segment One-Hand Corn Planter



Lightest, most accurate, strongest & most up to date planter on the market. All parts are interchangeable. Price \$2.00



POTATO PLANTERS



Hoover Visible With Automatic Seed Control. With the operator on the seat at the rear the whole planting operation is before him. This enables him to make certain that each picker is working properly, thus assuring perfect planting.

The Safety Fertilizer Attachment is equally efficient. You can regulate amount of distribution from 75 lbs. to 3,400 lbs. of fertilizer per acre.

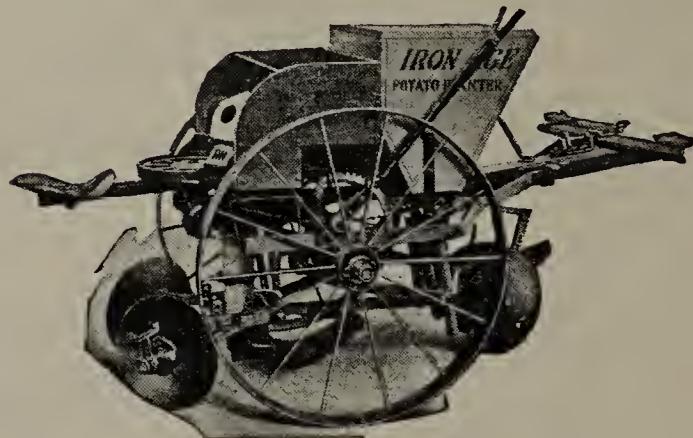
We can furnish the John Deere-Hoover Planter with fertilizer distributor in both 1 and 2-row sizes.

Price on application.

IRON AGE—Two Man, Assisted Feed

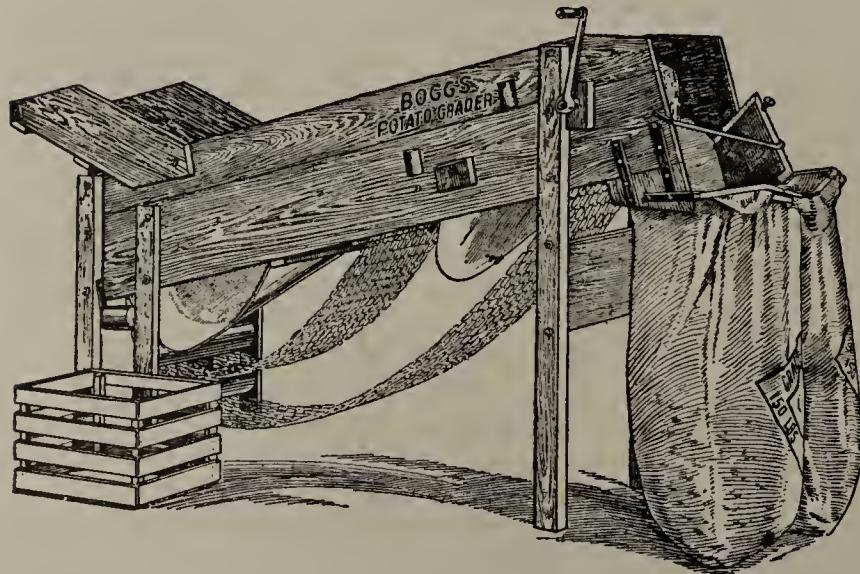
For many years it has been conceded that in its ground performance the Iron Age Planter exhibits the highest degree of perfection ever attained. By Iron Age ground performance is meant the opening of furrow, distributing of fertilizer, placing of the seed safely out of touch of the fertilizer and finally ideal covering and ridging. Equipped for large seed.

Price on application.



HOOVER POTATO CUTTER

This cutter meets the general demand for a first-class potato cutter. Provision is made to cut either large or small potatoes into the proper number of pieces.



BOGGS STANDARD HAND POTATO GRADER

Boggs No. 3 machine permits long or round potatoes to be sorted and graded into No. 1 and No. 2 sizes with less than 3% variation in size from government grades, and cleans them of all dirt, trash and culls in one operation. No. 3 hand grader as illustrated has a capacity of 150 bushels per hour.

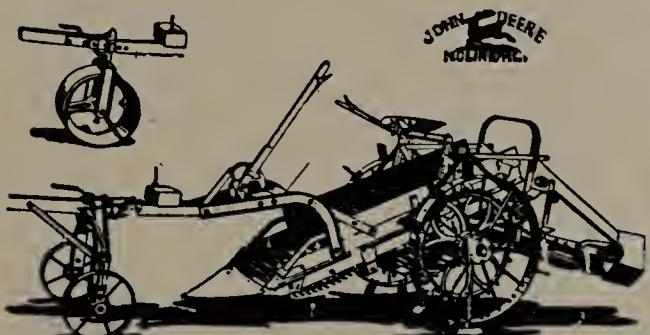
Price on application.

When large quantities of potatoes are to be graded, the power equipments will be found most advantageous. They not only have much greater capacity than the hand machine, but effect a big labor saving. Prices on applications.

In the field with his John Deere-Hoover, this farmer has efficient equipment for reducing his potato harvesting costs.



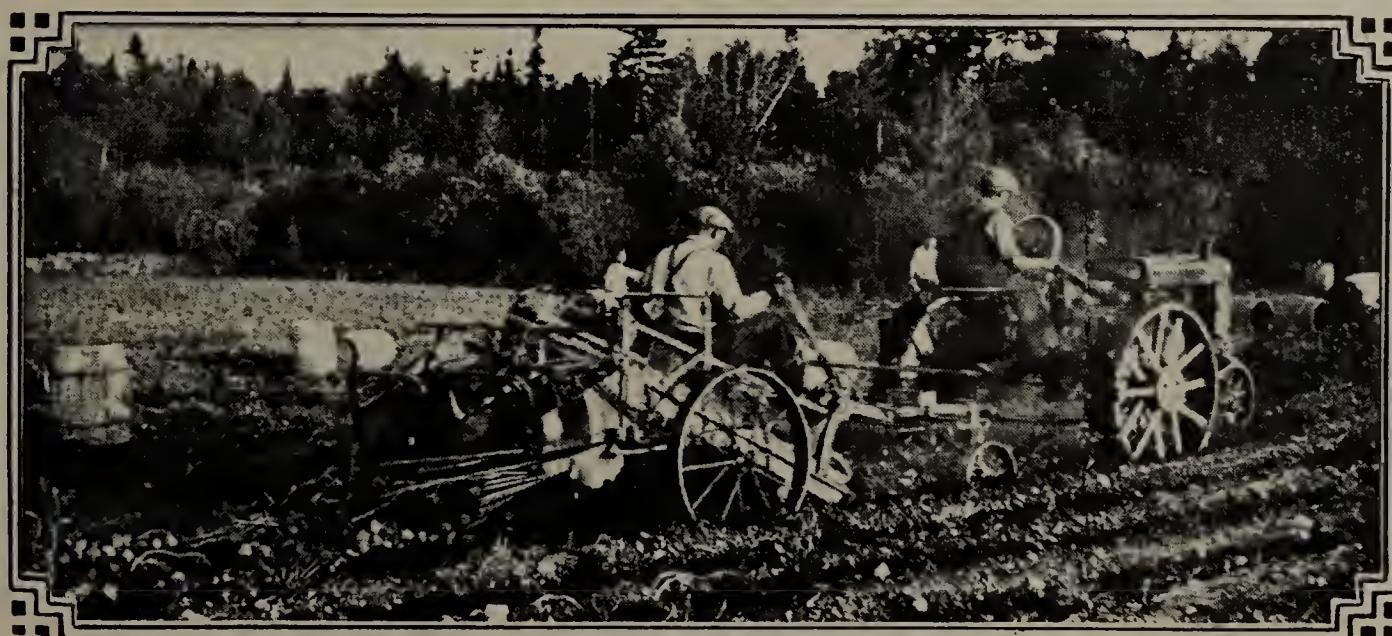
JOHN DEERE-HOOVER POTATO DIGGERS



The famous mechanical diggers dig the potatoes, dirt-free and unbruised. Shovel, of crucible plow-steel, scours and works in varied conditions without bending or breaking. Main sides are built up of two steel angles riveted together—much stronger than single-angle construction.

Furnished in one- and two-row sizes with ground engine or tractor drive, with equipment to meet your requirements.

Prices on application.

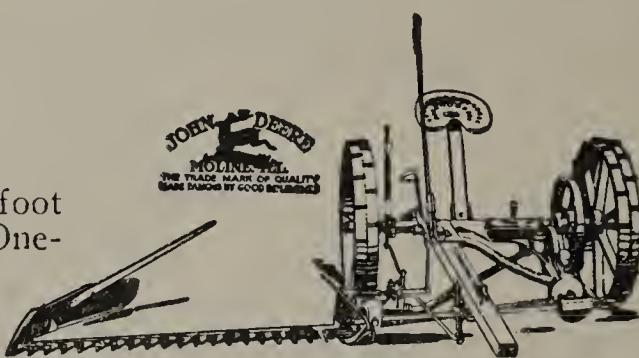


The John Deere-Hoover Two-row Tractor-Drive Digger, with the John Deere General Purpose Tractor furnishing adequate, steady power, has solved the harvesting problem.

John Deere High Lift Mower

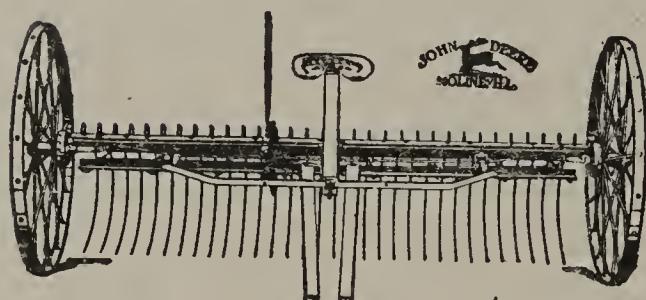
Sizes: Regular Frame No. 1, $3\frac{1}{2}$ -, $4\frac{1}{2}$ - and 5-foot cut; Big Frame, No. 2, $3\frac{1}{2}$ - to 7-foot cut; One-Horse $3\frac{1}{2}$ - and 4-foot cut.

Prices on application.



An extremely simple mower with a high, easy lift. Bar raised with foot lift amply high to pass over ordinary obstructions, with hand lift bar raised extremely high. A boy can operate it. Special arrangement of simple driving gears prevents side strain and undue wear on bearings. Maximum power delivered to carefully-made and accurately-fitted knife. Location of pinion on crank shaft prevents end thrust. Bar attached to wide yoke insures instant starting. Cutter bar floats and has great flexibility. All adjustments and repairs quickly and easily made with ordinary tools.

New John Deere — Steel Sulky Rake



The rake that gives years of service. Wheels interchangeable, and dump rods reversible, giving extra wear without repair expense. There is no hay too heavy or too light for the John Deere Sulky Rake. It will do the kind of work desired under all conditions.

Self-Dump — 8, 9, 10 and 12 foot.

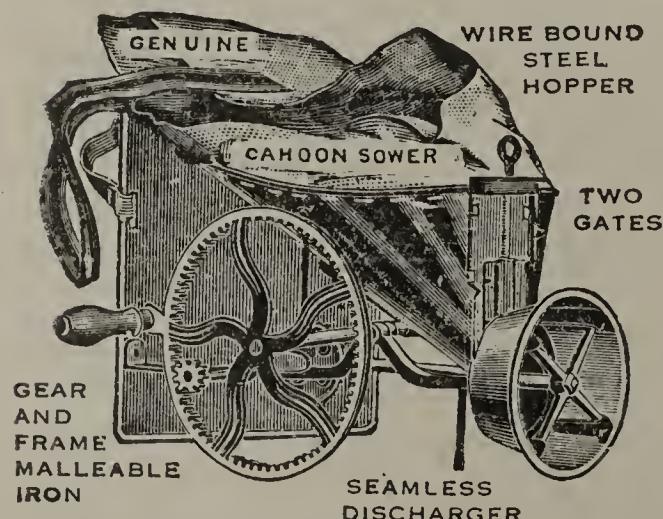
Prices on application.

Thompson Wheelbarrow Seed Sower

Sows timothy, clover, alsike, alfalfa, millet, turnip and various other seeds. Price 14 ft. \$16.00. Net Cash Price \$15.20. Grain box for above \$10.00.



Cahoon Broadcast Seed Sower



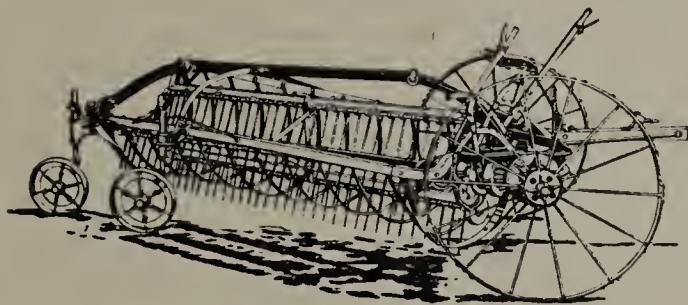
Price \$5.00 Net



Cyclone Broadcast Seeder

Price \$2.50 Net.

John Deere-Dain Combination Rake



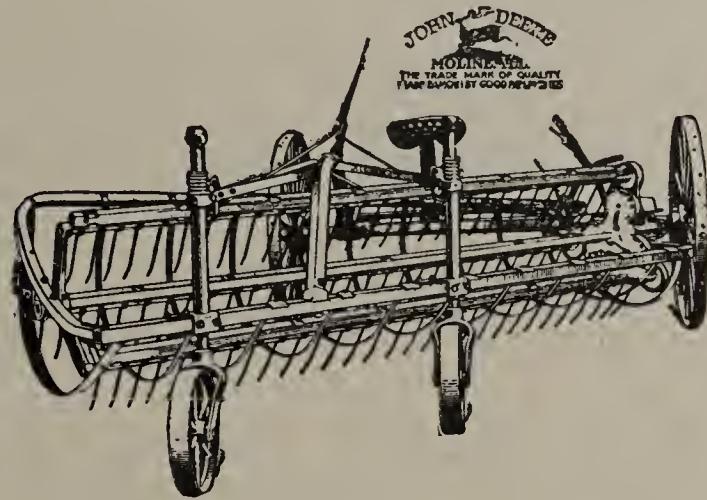
For the man who desires a combination rake, this machine will do satisfactory work. Moving one lever changes machine from rake to tedder. Angle of teeth easily changed, and either end of reel raised or lowered independently. Has ample clearance for heavy hay or large windrows. Left-hand wheel can be set in for turning windrows

Price on application.

John Deere-Dain System Rake For Air-Curing Hay

This rake aids the hay-grower in producing hay that brings the highest market price. Air cures hay without loss of color, foliage or feeding value when used according to the John Deere-Dain System of Air-Curing Hay. Rake follows mower while leaves are still active and lays the hay in loose, fluffy windrows, leaves inside, butts out. The foliage thus protected cures properly, does not get brittle and break off. Inclined frame gives greater capacity as volume of hay increases. Curved teeth lift hay gently — no dragging or threshing. All adjustments are made from the seat.

Price on application.



John Deere Single-Cylinder Windrow Hay Loader

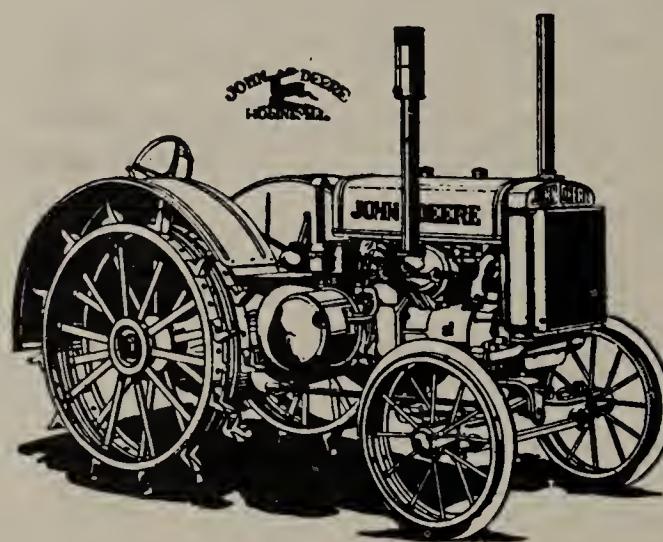


Very light draft and minimum number of working parts. Single drum mounted directly on the axle. Hinged carrier makes loading easy in windy weather. Furnished regularly with forecarriage — no lifting is necessary when coupling to wagon. Extra strong, well braced frame with hot-riveted corner plates. Gets all the hay when properly raked into windrows. Handles alfalfa and clover without knocking off valuable foliage parts. Capacity ample for all side-rake windrows. Made in 6 foot width with forecarriage.

Price on application.

JOHN DEERE MODEL D TRACTOR

For the Heavier Farm Jobs



All parts are readily accessible for inspection and adjustments from the outside of tractor—and in a standing position.

Here is real power to do your heavier farm jobs—the plowing, disking, combining, threshing—in big volume. In the John Deere Model D Tractor you get low-cost power, long-lived power—simple power—that you can use more days during the year for more years, with real satisfaction and extra profit.

Double air cleaner permits only clean air to reach cylinders—John Deere Tractors give long and continuous service under most severe dust and dirt conditions.

Filtering of air, fuel and oil before reaching the engine is a safety measure that reduces wear and lengthens the life of John Deere Tractors.

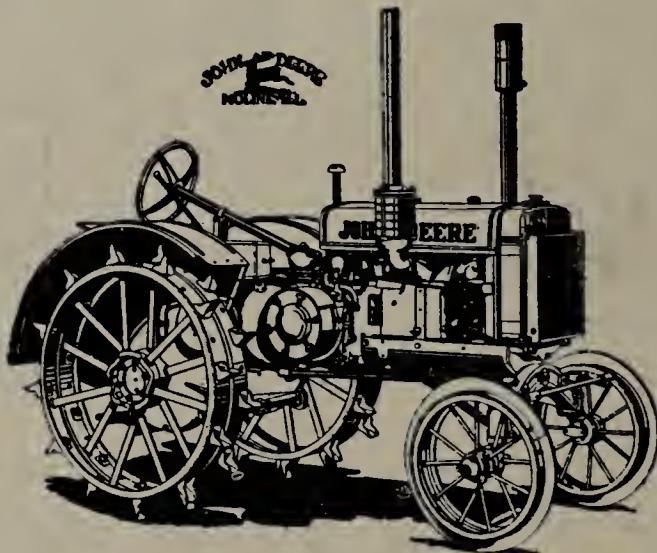
JOHN DEERE GENERAL PURPOSE TRACTOR

Thousands of farmers are now profiting from the use of the John Deere General Purpose Tractor and its equipment. For thousands of other farmers the equipment will make possible a better, more profitable method of farming.

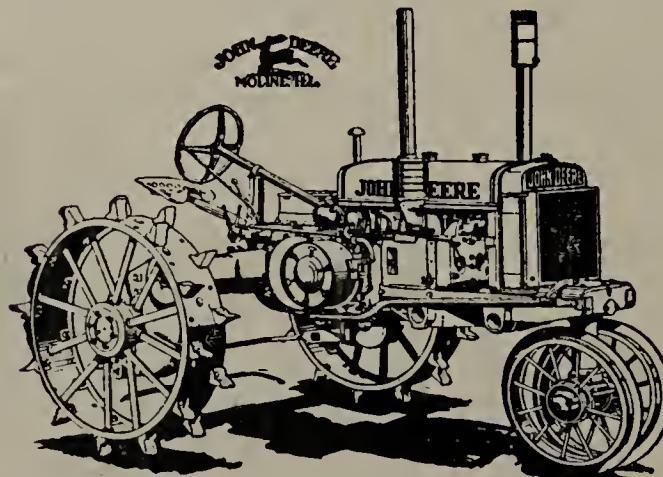
This is the tractor that will do all farm work within its power including planting and cultivating and do every job well.

The row-crop farmer can now utilize mechanical power in a practical, money-making way.

The field of corn that required six days in planting can now be planted in three days or less. It would require a crew of four or more men and eight or more horses, with single-row cultivators, to cultivate the same acreage one man can cultivate with this John Deere General Purpose outfit.



JOHN DEERE GENERAL PURPOSE WIDE-TREAD TRACTOR



Equipped with Regular Solid-Tired Steel Rear Wheel and Steel Front Wheel

Potato growers say it is the most practical tractor ever built for use in narrow-row crops; that it handles the plowing, planting, cultivating and harvesting work at lower costs than were ever before thought possible.

On hilly farms, its special wide-tread construction often enables it to meet conditions better than tractors of standard design; and with the two-row power-lift cultivator it is an ideal power outfit.

Prices on application.

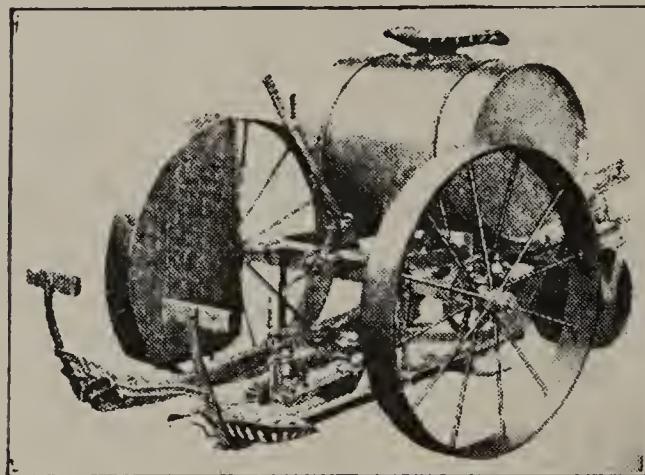


Broadleaf tobacco grown on O. & W. Fertilizer by Fred Leone, Silver Lane
East Hartford, Conn.



Havana tobacco grown on O. & W. Fertilizer by Samuel Adams
Suffield, Conn.

New Improved Tiger Transplanter



The lifting lever works on an eccentric. A child can lift the weight of two men and when the lever is operated it automatically throws machine out of gear.

Simply and strongly made with these new improvements this machine is rapidly coming into favor with discriminating buyers. This machine has $1\frac{1}{4}$ inch water connections. The flow of water is under perfect control and can be regulated to deposit as small a quantity as desired, or to discharge one pint to each plant.

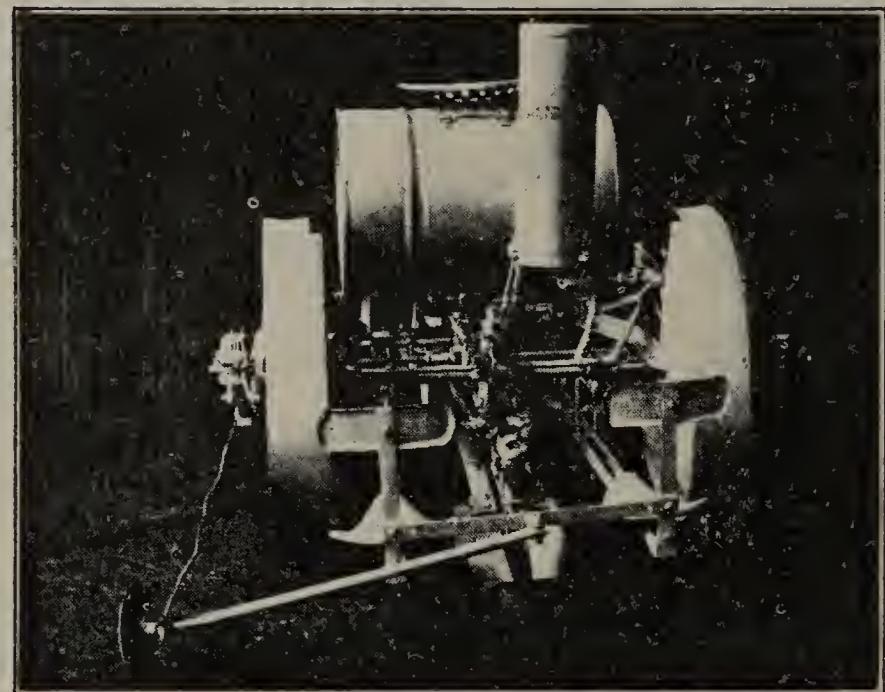
Price on application

Bemis Transplanter

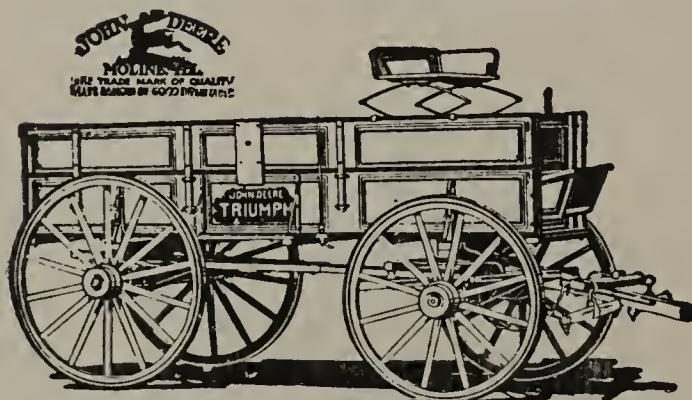
Thirty-five years of practical experience is embodied in the Bemis.

Nearly every tobacco farm in the Conn. Valley is equipped with one or more of these implements.

Price on application.



John Deere Triumph Wagon



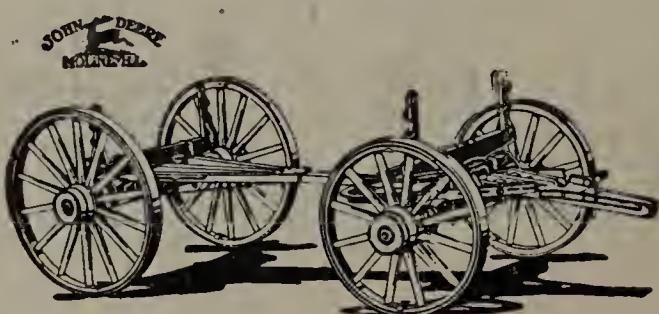
An attractive light-running wagon of moderate price having many of the features to be found on the more expensive John Deere wagons, among them the sand-and dust-proof skeins and malleable fifth-wheel bolster plate with corrugated coupling. Clipped gears; square wood front hounds of straight-grained oak; wheels are built strong of high grade material; hubs are oak or No. 1 black birch; oak or hickory spokes; box is firmly braced and strengthened with cross cleats and straps.

Prices on application.

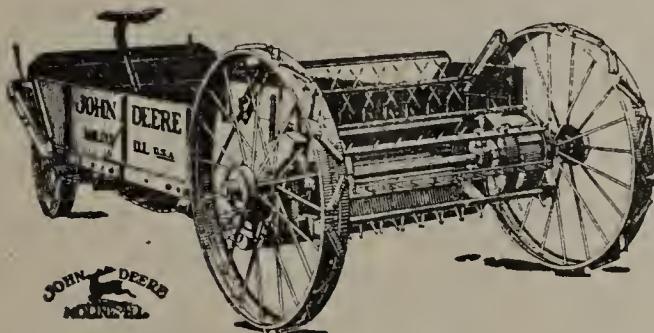
John Deere Farm Truck

In price, strength, draft and finish, John Deere farm trucks give exceptional satisfaction. They stand hard usage year after year because they are built right and in a factory that has an established reputation for making only the best.

Prices on application.



The Old Reliable John Deere Manure Spreader



In 1911 came the greatest change ever made in spreader design — the invention of the John Deere Spreader — the spreader with the beater on the axle; a machine that combined a low easy loading box with high drive wheels. This still is the preferred spreader on thousands of farms.

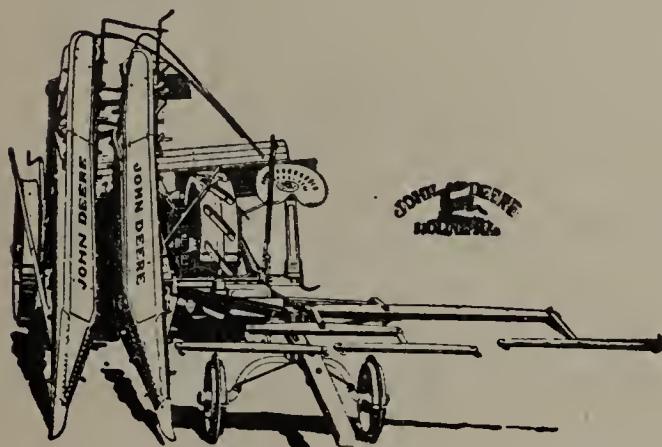
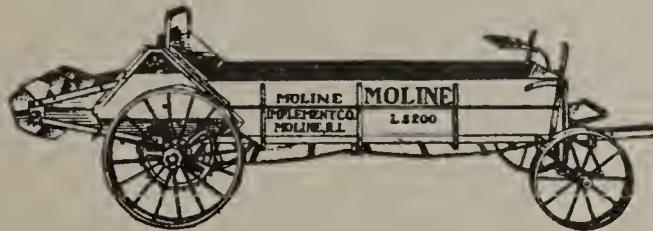
Price on application.

Moline No. 200 Manure Spreader

A new sturdy, but light weight spreader simple in design.

50 Bushel size with 2 Horse Hitch.

Price on application.



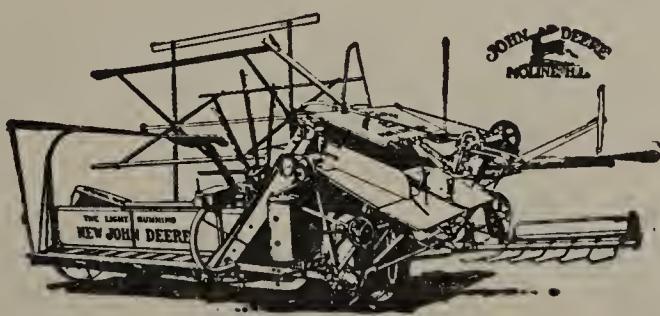
John Deere Corn Binder

This binder is unusually easy to operate. By merely pressing foot-trip lever, power carrier delivers bundles free of horses' path and practically at right angles to standing corn. All steel quick turn Tongue Truck takes neck weight from horses and also makes it easy turning. Stiff pole and tractor hitches can be furnished.

Price on application.

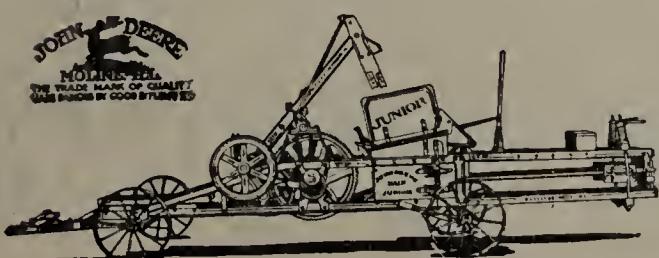
John Deere Grain Binder

Main frame is extra strong. Bars are widely overlapped and hot-riveted together. Into forged-in-frame bearing supports are fitted self-aligning bearings which cannot get out of line.



Price on application.

John Deere-Dain Junior Motor Hay Press

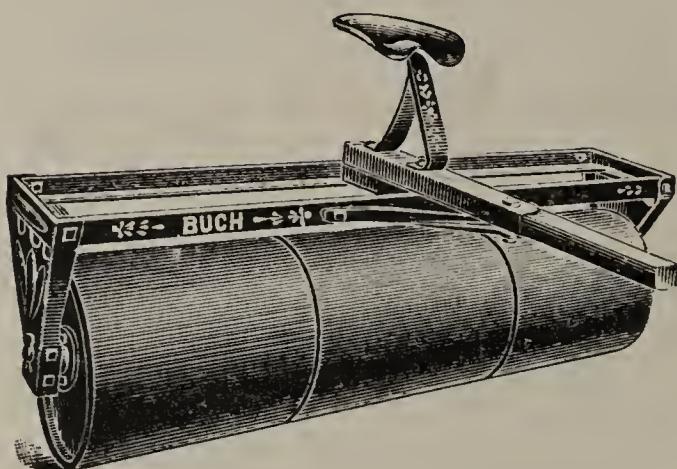


A Light Weight Outfit Built for Individual Use.

Baled hay brings the highest market price. Hay that is baled is more easily handled, and requires less storage space.

This press will bale successfully hay, alfalfa, straw, etc.

Price on application.



STEEL LAND ROLLER

The drums are heavy steel sheets not easily dented. The ends are closed to keep out dirt and trash. The frames are heavy angle steel securely bolted.

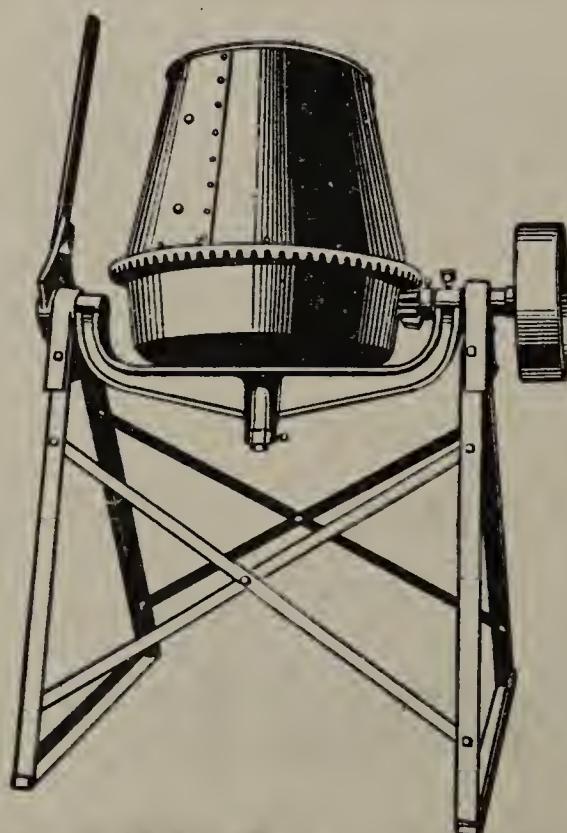
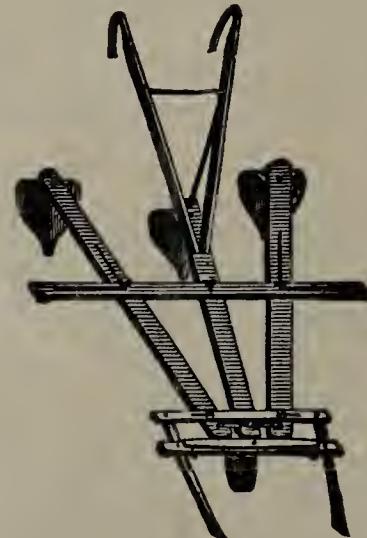
Price \$50.00. Net Cash Price \$47.50.

GOSLEE IMPROVED FIELD MARKER

(Spread 2 to 4 feet)

This machine is designed to mark out rows any width for any crops grown in rows. Teeth are adjustable to any size and depth drill.

Price \$18.00. Net Cash Price \$17.00.

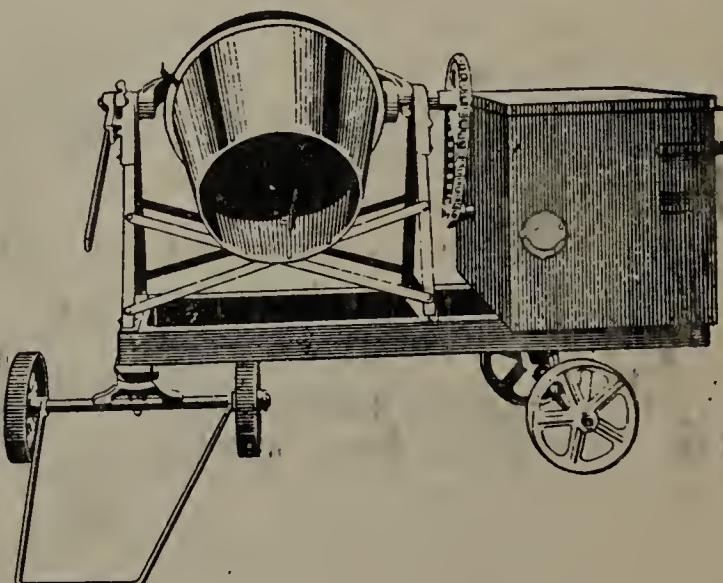


THE JUMBO CONCRETE MIXER

Capacity from 27 to 45 cubic yards of well mixed concrete a day. Have you ever figured out just how much time and money a good concrete mixer would save you?

A Jumbo, for example, with a squad of four men will do the work of 8 to 10 at hand mixing, which means a saving of at least \$15 a day — and a better mix can be obtained. Can be operated by hand or engine.

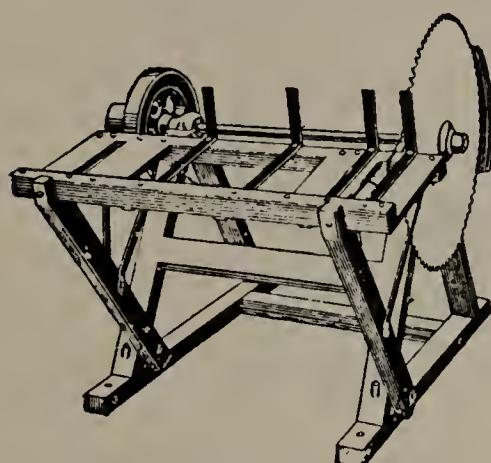
Price \$28.00. Net Cash Price \$26.60.



THE JUMBO CONCRETE MIXER Mounted on Truck With Jumbo 1 3/4 H. P. Engine

Several advanced and practical features of internal combustion engine design are embodied in the Jumbo construction. For example, the magneto is attached to the cylinder head directly over the intake valve, which insures positive ignition, and longer life to the igniter insulation, and complete utilization of the fuel.

Price \$110.00. Net Cash Price \$104.50.



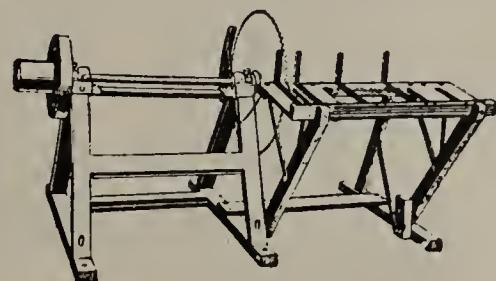
Jumbo Saw Frames

No. 700 With Tilting Table. Built especially for sawing cord wood. Mandrel of finest cold rolled steel $1\frac{1}{16}$ " dia., 49" long — fitted for saw with $1\frac{3}{8}$ " hole. Flywheel is accurately machined and carefully balanced, $15\frac{1}{2}$ " dia., weight 65 lbs. Standard pulley size 6 x 6".

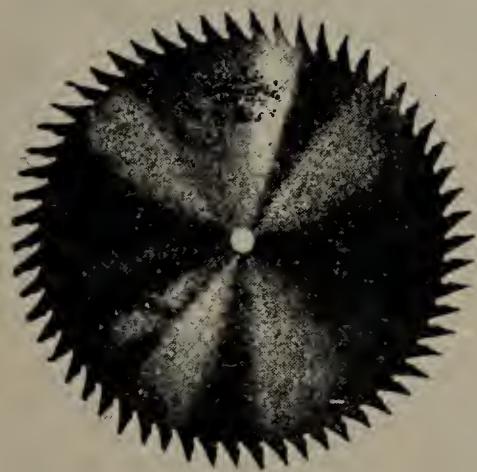
Price \$25.00. Net Cash Price \$23.75.

No. 701 With Pole Extension — One of the best frames obtainable for sawing long poles and heaviest cord wood.

Price \$28.00. Net Cash Price \$26.60.



Curtis Guarantee Cord-Wood Saws



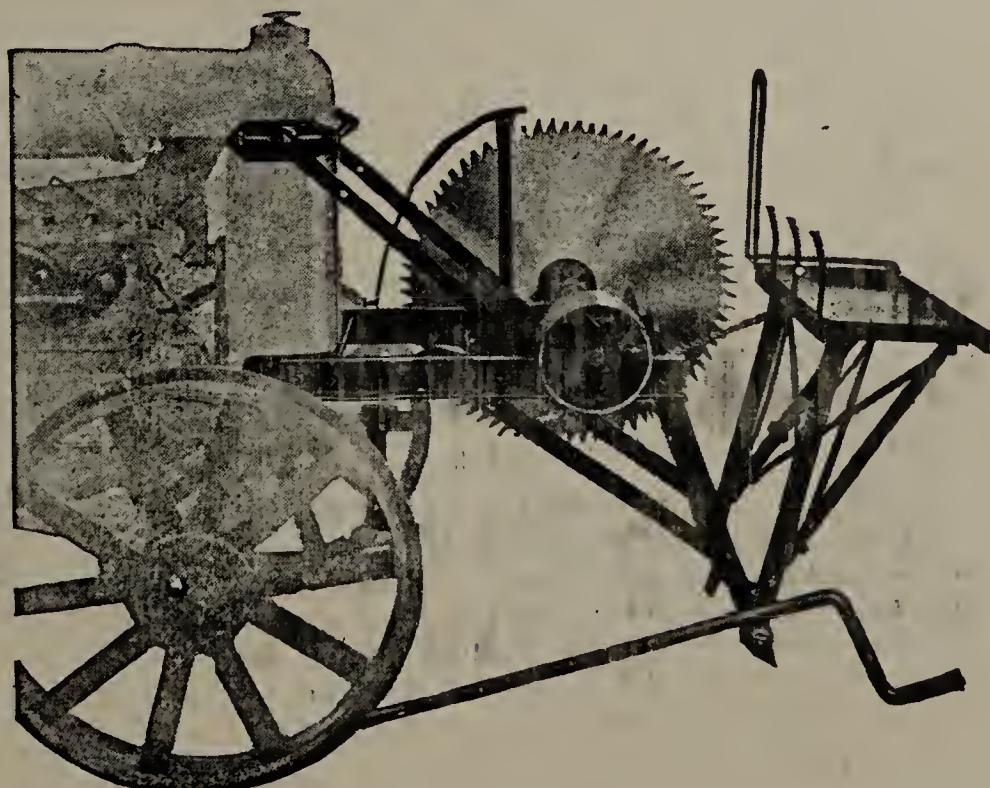
Always run the saw at proper speed, too high or too low is equally bad.

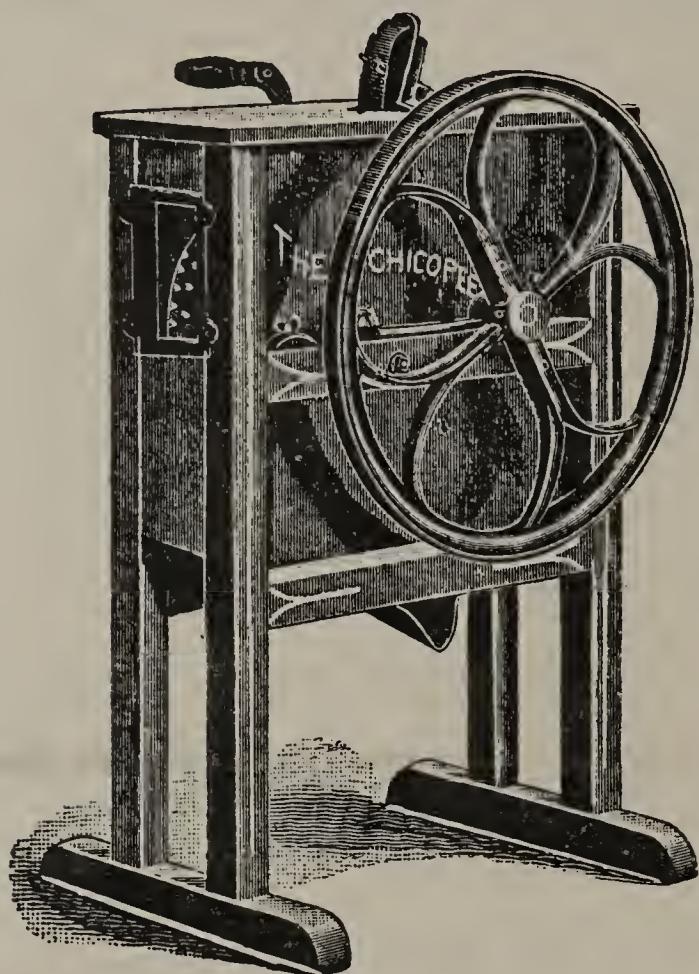
Dia.	No. Teeth	Speed	Net Price
20"	52	1800	\$3.50
22"	56	1636	4.00
24"	60	1500	4.50
26"	64	1384	5.00
28"	70	1285	5.75
30"	76	1200	6.50

Stover Saw Frame

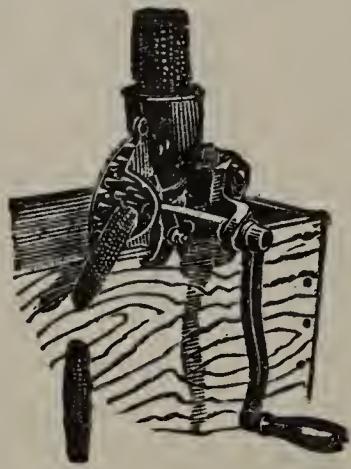
Take the saw to the wood not the wood to the saw. With the Stover Rig attached to your Fordson, you can take your outfit wherever poles, etc., happen to be, saw them up, and go on. Complete with 30" saw and 5" rubber belt.

Price \$50.00.
Net Cash Price \$47.50.





The Red Chief Corn Sheller



A substantial but low priced corn sheller, made of iron, painted red. Can be attached to a barrel or box. Adjustable for large and small ears. **Price, \$2.75.**

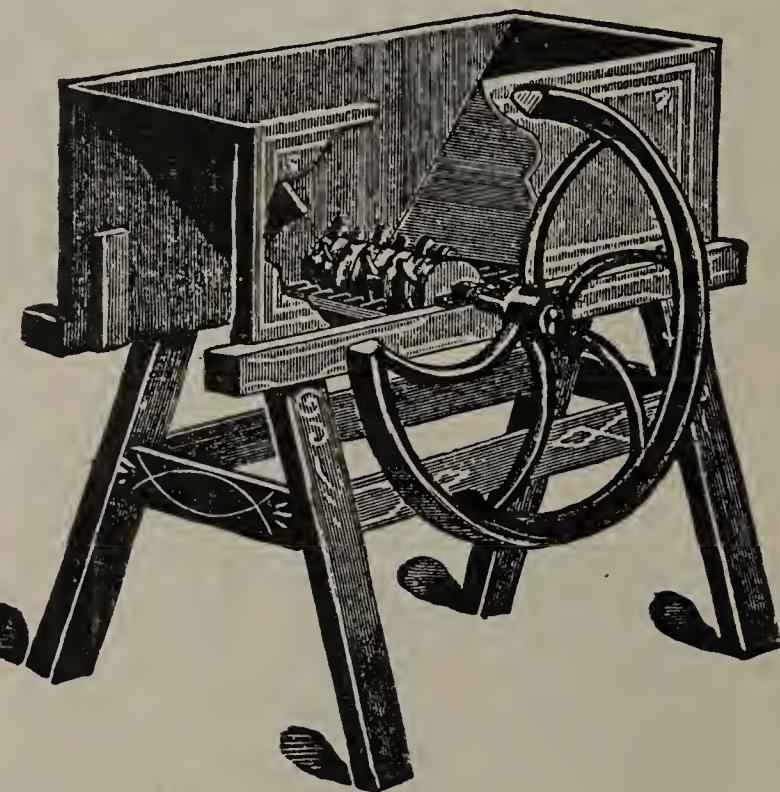
Corn Shellers

Chicopee — One hole hand. (as shown)
Price \$12.50. Net Cash Price \$11.88.

Chicopee — Two hole power.
Price \$30.00. Net Cash Price \$28.50.

Lion — One hole hand.
Price \$13.50. Net Cash Price \$12.83.

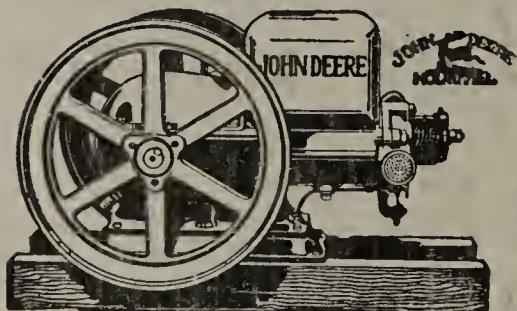
Champion Vegetable Cutter



This is one of the best machines in the market for cutting all kinds of vegetables. It is made with a wrought shaft with sections of knives fastened to it, and arranged so that a rotation of knives is continually passing a bed knife with cross knives passing between the section of knives; cutting always near the center shaft, making it cut easy and fine enough for cattle or sheep; also making a very regular cut.

This machine will cut sixty bushels an hour
Price \$12.00.
Net Cash Price \$11.40.

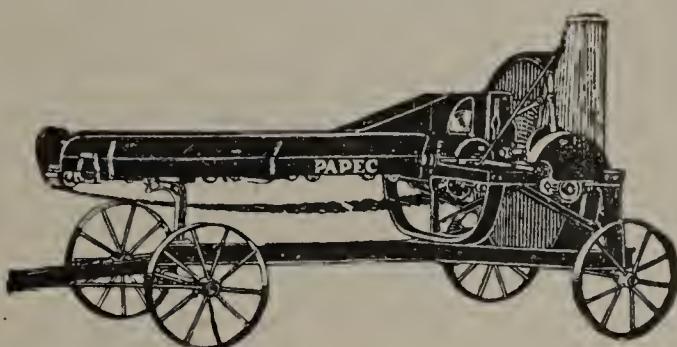
John Deere Type E Farm Engines



Contain the greatest improvements in engine building made in years. All important working parts fully enclosed in dust-proof case are oiled automatically. Magneto equipped.

Price on application.

Papec Cutters



Pay Their Own Way

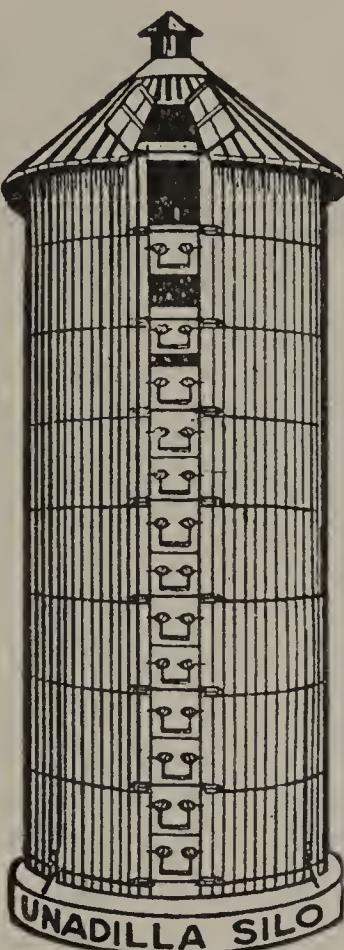
Price List of Papec Ensilage Cutters, Hay Choppers and Accessories. Effective Jan. 1st, 1933.
F. O. B. Factory. Terms, Etc. as per Contract. Prices Subject to Change Without Notice.

Machine Style	Equipped With	Capacity Tons per Hour	H. P. Tractor or Engine	Length of Cut in Inches	Rev. per Minute	ON LEGS Price	Code	4-WHEEL MOUNT Price	Code	Pulleys	Shipping Weight On Legs Mounted
Cutters											
No. R	2 knives	2 to 5	3 to 6	1, 1, 1, 1	700	\$160.00	Reach	\$190.00	Razor	923	1115
No. 81	2 knives	5 to 10	6 to 10	1, 1, 1, 1	650	205.00	Nurse	240.00	Nabob	1214	1484
No. 81	3 knives	8 to 12	10 to 14	1-6, 1, 1, 1	650	225.00	Nozzle	260.00	Nutmeg	1240	1510
No. 127	3 knives	12 to 20	14 to 20	1, 1, 1, 1	600	.....	.....	300.00	Lath	.....	1998
No. 127	6 knives	12 to 20	14 to 20	1, 1, 1, 1	600	.....	.....	340.00	Lamp	.....	2073
No. 168	3 knives	20 to 30	20 to 30	1, 1, 1, 1	500	.....	.....	395.00	Knight	.....	2670
No. 168	6 knives	20 to 30	20 to 30	1, 1, 1, 1	500	.....	.....	445.00	King	.....	2765
Choppers											
Hay											
N*	3 knives	1 to 3	10 to 14	1-6, 1, 1, 1	650	1 finger feed roll	\$315.00	Nido	.....	1520	.....
L	3 knives	2 to 4	14 to 20	1, 1, 1, 1	600	1 finger feed roll	365.00	Lido	.....	2035	.....
L	6 knives	2 to 4	14 to 20	1, 1, 1, 1	600	1 finger feed roll	405.00	Lidora	.....	2110	.....
K	3 knives	3 to 5	20 to 30	1, 1, 1, 1	550	1 finger feed roll	470.00	Kido	.....	2725	.....
K	6 knives	3 to 5	20 to 30	1, 1, 1, 1	550	1 finger feed roll	520.00	Kidoro	.....	2810	.....
K	3 knives	4 to 7	20 to 30	1, 1, 1, 1	550	3 finger feed roll	650.00	Kimbo	.....	3396	.....
K	6 knives	4 to 7	20 to 30	1, 1, 1, 1	550	3 finger feed roll	700.00	Kimly	.....	3481	.....
Equipment											
Rockwood interchangeable pulleys over 12 in. diameter. \$1 extra every 2 in. increase.											

NOTE—Ensilage Cutter prices include traveling-feed table, 30 feet of pipe, elbow for top of pipe, tilting joint and extra set of cutting knives. Only 50% credit allowed on parts not wanted. Above are combination prices for complete units. When any regular parts are not wanted with machines, credit or deduct at one-half price, NOT full price.

NOTE—Hay Chopper prices include traveling feed table, 18 feet elevating pipe, swivel elbow, 2 lengths curved pipe, extra set cutting knives and tilting joint.

*Not furnished with six knives.



The
UNADILLA
SILO
is built for
a Lifetime

The Louden Litter Carrier

We believe this to be by far the greatest litter carrier ever built. Made to handle heavy loads of wet manure easily, safely and for many years.

Tub is water tight, full 12-bushel capacity. The worm gear hoist on this Louden Carrier is built on the same principle as the highest grade industrial hoists. It is far superior to the dangerous, troublesome brake and ratchet type.

Load hangs squarely under the track with minimum wear on trolleys. Roller bearing wheels. Sturdy steel track, good for a lifetime. Tub trips from either end. In every respect a quality carrier. Close comparison with any other merely emphasizes its outstanding superiority. Prices and complete description gladly furnished. Ask for them.



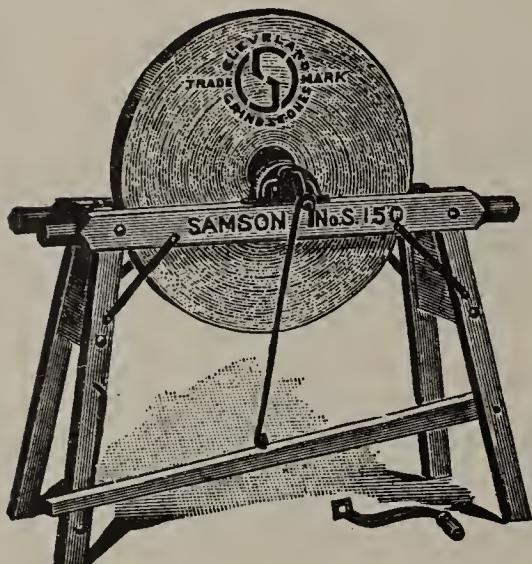
LOUDEN DETACHABLE WATER BOWL

Mastermade.....	\$4.10
Economy	2.60

GRINDSTONES

SAMSON MOUNTED GRINDSTONES

This frame is made of seasoned hard wood. The legs are securely gained into side pieces and the ends are in one piece. Two bolts at each end pass through the entire frame from side to side. The ends of the side bars are neatly turned to serve as handles. No. 1 with large stone. **\$10.50 Net.**
No. 2 with medium stone **\$10.00 Net.**



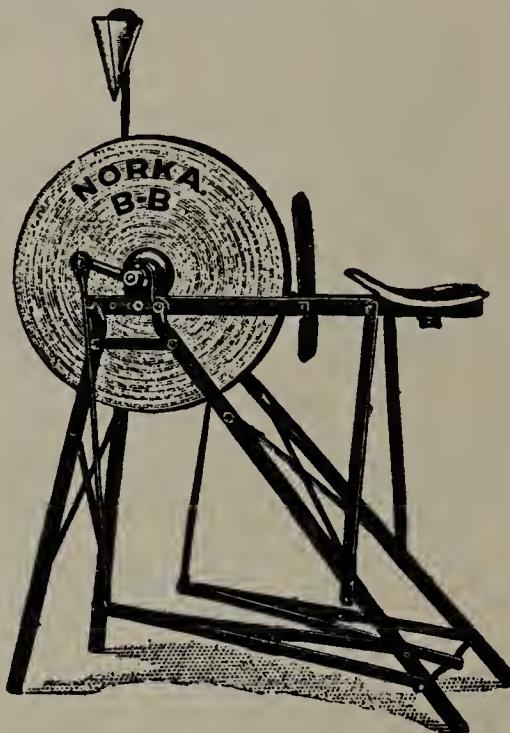
NORKA BALL BEARING GRINDSTONE

A very strong and easy running grindstone, practically indestructible. The frame is constructed of heavy tubular steel, thoroughly braced. The shaft is of cold rolled steel and turns in a splendid ball bearing device. The Pitman connection is also ball bearing.

Price **\$10.00 Net.**

SCYTHE STONES

Aloxite



Made in four sizes.

- No. 188 — 10" long Price **\$0.30**
- No. 190 — 10" long " .30
- No. 191 — 12" long " .35
- No. 192 — 10" long (heavy) .35

CARBORUNDUM NO. 57 FILE

Here is one of the most useful tools that you can own. Will sharpen about every farm or garden tool. Price **\$1.00.**



Pike Scythestones

Indian Pond

The original Pike Red End. Sold the world over for nearly a century. Gives a quick, medium coarse edge.

Price 25c



Black Diamond

Very fine gritted but extremely sharp and fast cutting, giving a fine lasting edge. Flat octagon in shape.

Price .20c



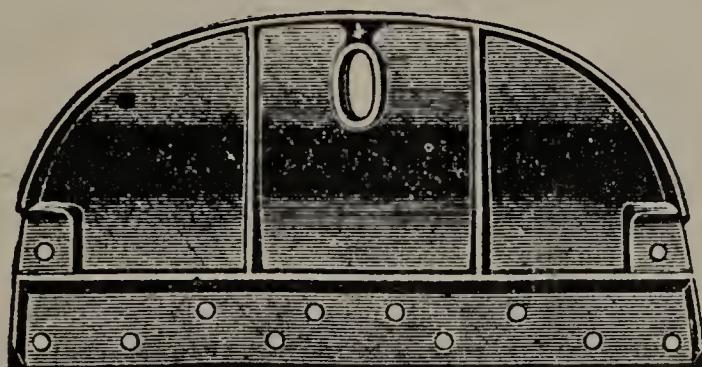
Fig. 603.

STEEL DRAG SCRAPERS

- No. 3 — 3 cubic ft. **\$8.50 Net.**
- No. 2 — 5 cubic ft. **9.00 Net.**
- No. 1 — 7 cubic ft. **9.50 Net.**

STONE BOAT HEADS

The illustration below shows a simple device whereby a stone-boat can be made in a few minutes by using a straight plank with the addition of the Iron Head. Anyone in need of a stone-boat will readily see how easy it is done, and as one head will last for years, it is not only cheap, but durable.



Cast Iron 32 inches—Price with Bolts \$7.00

Steel 34 inches—Price with Bolts \$6.00

COMPLETE STONE BOAT

The Handiest Implement on the Farm



The front of high grade quality carbon steel, 34 inches wide, firmly bolted and braced to the raves and bottom boards, which are hardwood.

Price \$16.00 Net



Axe Mattocks, - - \$1.00
Pick Mattocks, - - 1.00
Mattock, or bog hoe, 1.00

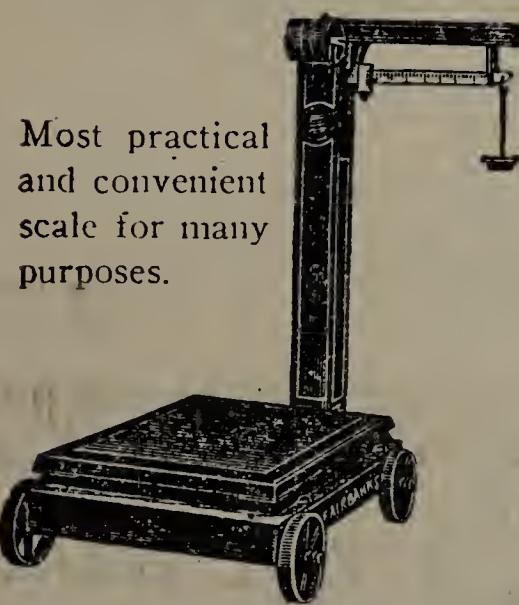


Railroad Picks... 1.00

AXES

Clipper	.....	\$1.75
Spiller	.....	2.00
Collins	.....	2.00
Rogers	.....	2.75

Fairbanks Portable Platform Scales



Most practical and convenient scale for many purposes.

Price on application.



Dairy Scales

Graduated in 1 oz. Weighs 30 lbs. Made especially for dairymen. Has adjustment for taking out weight of pail.

Price \$3.50



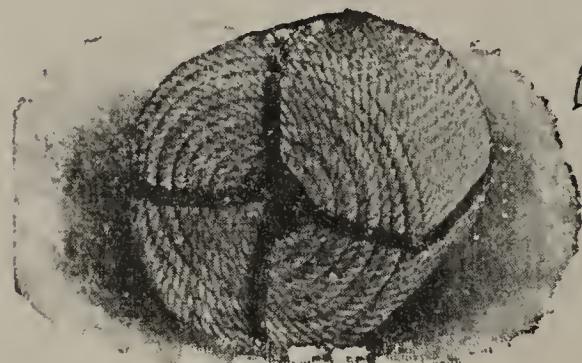
BUSH or BILL HOOKS
Heavy, (handled)
\$2.00

GIBBS POST HOLE DIGGER

Price \$2.75



ROPE

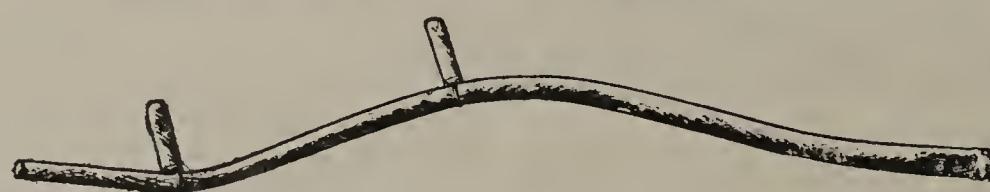
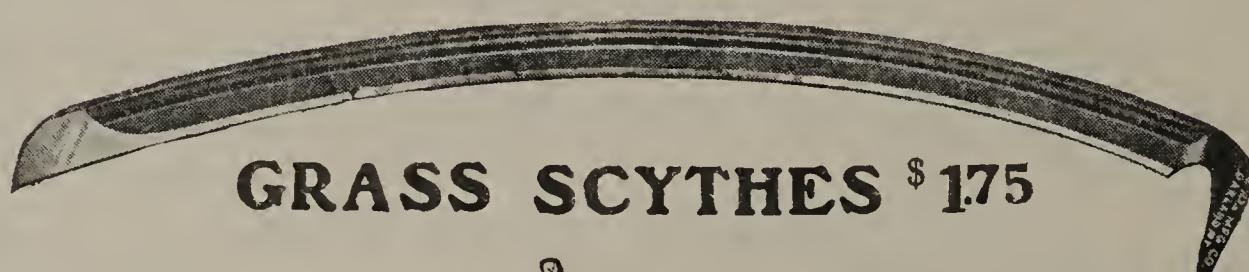


We carry in stock pure Manila Rope, sizes from $\frac{1}{8}$ inch to $\frac{1}{2}$ inch:

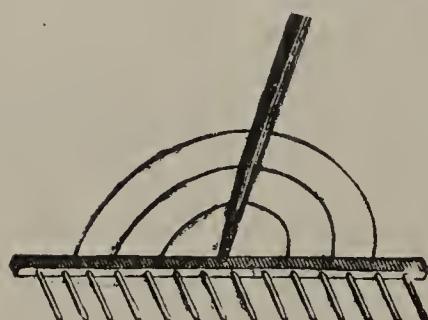
Bush and Weed Scythes

These Scythes are made of cast steel, with blades wide and heavy for rough work. The "Bush" varies in length from 12 to 22 ins. The "Weed" varies in length from 22 to 30 ins.

Bush \$1.75 Weed \$1.75



SCYTHE SNATHS—Ash
Grass, \$1.75 Bush, \$2.00



Wood Hand Rakes

The heads and teeth are of hickory, the handles of ash.

Lightning Hay Knife



Blades—Polished and enameled.

Length—36 inches.
\$1.75

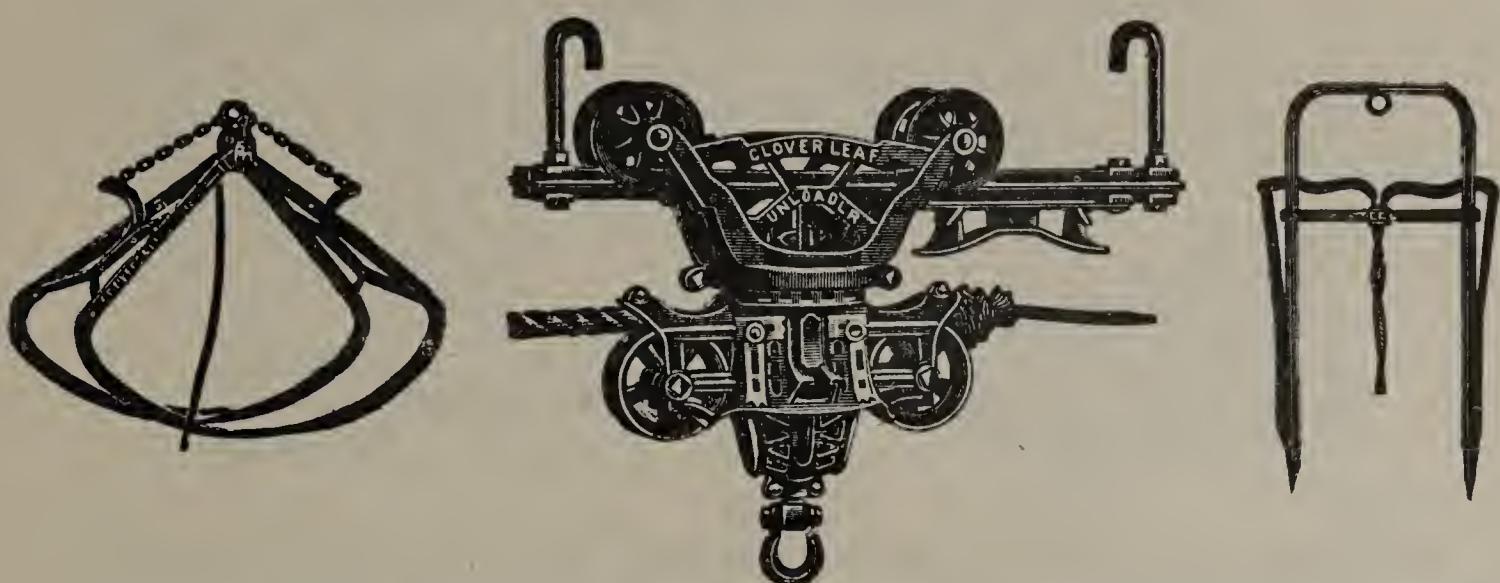
Three-Tine Hay Forks



The best all around forks for feeding, loading and pitching to stack or mow.

4 ft. Bent handle, 13 in. Tine, plain ferrule	.	.	.	.	\$1.10
4 $\frac{1}{2}$ ft. " 13 " " "	.	.	.	.	1.20
5 ft. " 14 " " "	.	.	.	.	1.35
5 $\frac{1}{2}$ ft. " 14 " " "	.	.	.	.	1.45
6 ft. " 14 " " strap ferrule	.	.	.	.	1.60

Myers Hay Unloader

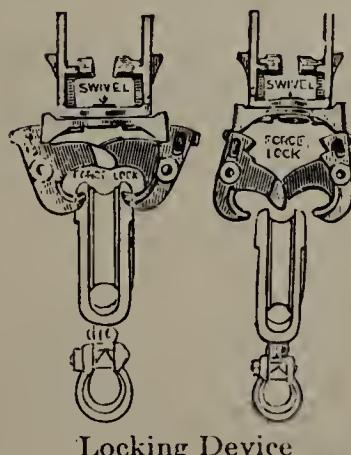


The advantage of a hay carrier as a means of storing away Hay or Grain are so well known that it is not necessary to go into details. They save the time and expense of from one to three men at harvest time—a large item.

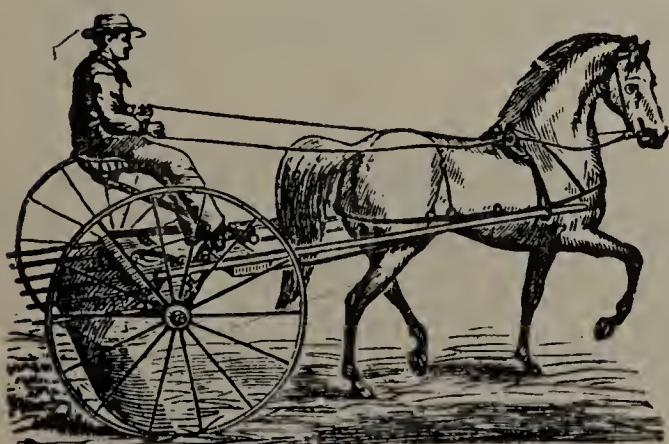
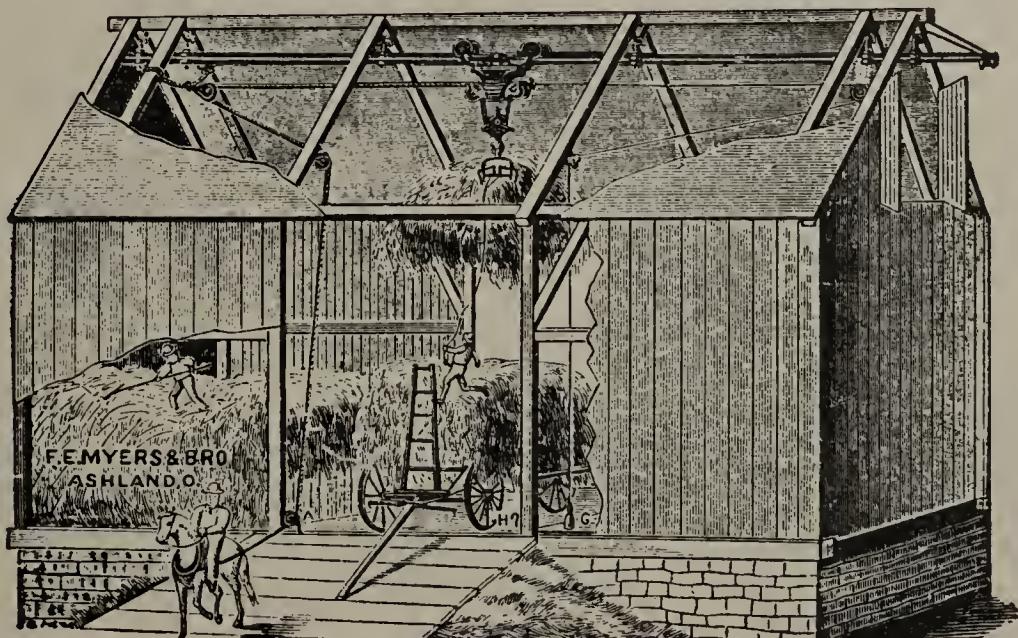
PRICES

Clover Leaf Hay Unloader No. 118	9.00
Double Steel Track	.21 per ft.
Hanging Hooks	.16 each
Rafter Brackets	.05 "
3/4" Floor Hooks	.16 "
Wood, Knot Passing, Pulley Fig. 1120.	.65 "
Double Harpoon Fork Fig. 1314	2.75 "
Four Tine Grapple Fork Fig. 1351	9.50 "
Six " " " " 1438	11.00 "

Discount on complete outfit.



Locking Device



Price \$44.00
Net Cash Price \$41.80

Yankee Hay Rake

24 TEETH

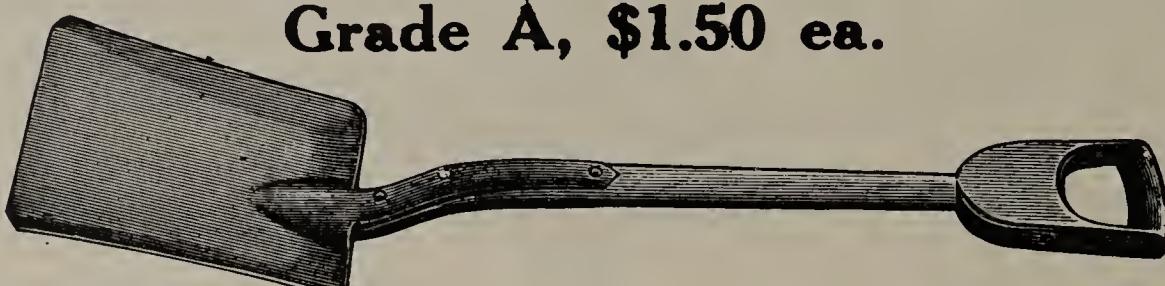
This is the old reliable Yankee, which needs no introduction. It is a very easy rake to operate, each tooth being independent; it will pass over large stones without breaking the teeth. It is so easy to operate that a child can handle it.



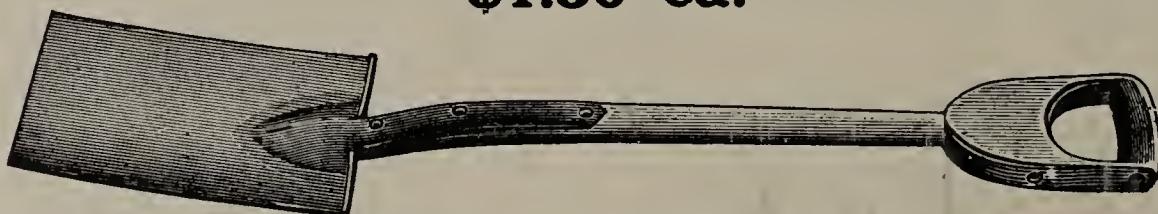
SQUARE AND ROUND POINT WOOD D. OR LONG HANDLED PLAIN BACK FULL POLISHED SHOVELS

No. 2 and No. 3,

Grade A, \$1.50 ea.



WOOD D. OR LONG HANDLED PLAIN BACK
FULL POLISHED No. 2 SPADES
\$1.50 ea.



COAL SCOOPS



No. 3 Riveted back	\$1.75
No. 4 " "	1.85
No. 5 " "	1.95

HOUSEHOLD FURNACE SCOOPS

Long Handle	1.00
Mal. D. Handle	1.00
Oliver Ames	2.00



SNOW SHOVELS



No. 25 Trojan spring steel (black) . . . . .	.95
No. 29 Eclipse (Galv.)	1.10

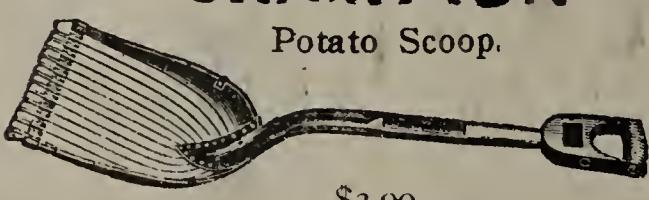
SIDEWALK CLEANERS

Wirts Snow Pushers	1.75
No. 81 Snow Scoop 30 in.	8.00
Sidewalk Cleaners, socket pattern . . . . .	.85



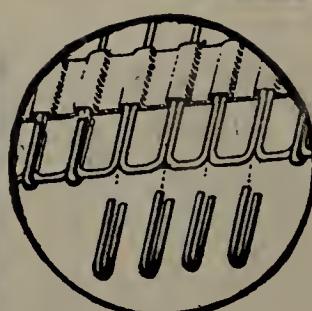
CHAMPION

Potato Scoop.



\$3.00

(Readick Patent)
Furnished with stiff
double steel socket straps
and side pieces and staple
edge. Blade, 13" x 16".
Standard D handle.
Specially recommended
for the handling of corn
and potatoes.



Manure Forks



	Price	Price	Price
	4 Tine	5 Tine	6 Tine
Long Handle Common Ferrule	\$1.35	\$1.50	\$1.75
Long " Strap "	1.45	1.65	1.85
Mal. D " Common "	1.35	1.50	1.75
Mal. D " Strap "	1.45	1.65	1.85
Wood D " Common "	1.60	1.75	1.85
Wood D " Strap "	1.70	1.85	2.00
Large 4 Tine Fork for handling light manure. Wood D	\$2.75.	Mal. D	\$2.50

Steel Manure Hooks



4 Tine Bent Head 5 ft. Handle	\$1.15	6-ft. handle	\$1.30
5 " " " 5 ft. "	1.30	6-ft. handle	1.45

Steel Potato Hooks

4 Tine Bent Head 4 1/2 ft. Handle	.	.	.	.	.	.	.	\$0.90
5 " " " " "	..	.	.	.	.	.	.	1.15
6 " " " " "	.	.	.	.	.	.	.	1.25

"TIFFANY" All Steel Tree Pruner

Cuts from Both Sides of the Limb and Does Not Bruise the Bark



Cuts 1 1/2-inch
limbs with
ease

Light, powerful
and practical



This is a strictly high-class pruner in every detail. It is hammer forged from fine crucible steel, which is made expressly for the manufacture of "Tiffany" pruners. The blades are carefully tempered in oil, and put together with a heavy rivet under tremendous pressure, which insures a good fit, and can be quickly tightened with a hammer, having no nuts or complicated joints to get loose.

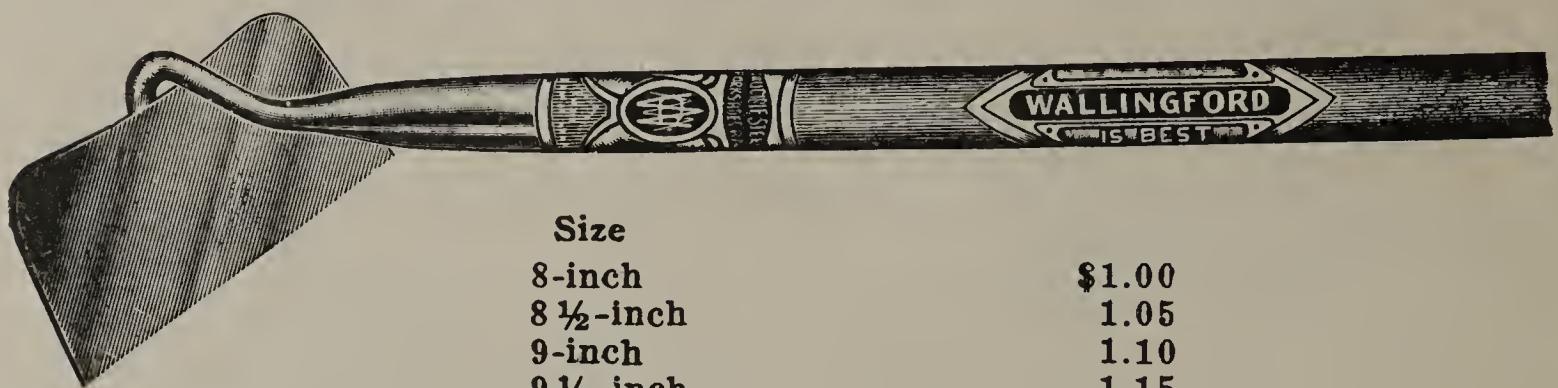
The blade has the draw cut principle and cuts very smooth and easy. Its high quality will prove it a good investment.

Length 20 in., wt. 2 1/2 lbs. Price,	.....	\$3.25
Length 25 in., wt. 3 lbs. Price,	.....	3.50
Length 30 in., wt. 3 1/2 lbs. Price,	.....	4.00

Dandelion
Weeders 35c each

TOBACCO HOES

These Hoes are specially adapted to Connecticut Valley Trade.



Size

8-inch	\$1.00
8 1/2-inch	1.05
9-inch	1.10
9 1/2-inch	1.15
10-inch	1.20
11-inch	1.25

Less 10% discount in lots of 1 dozen or more.

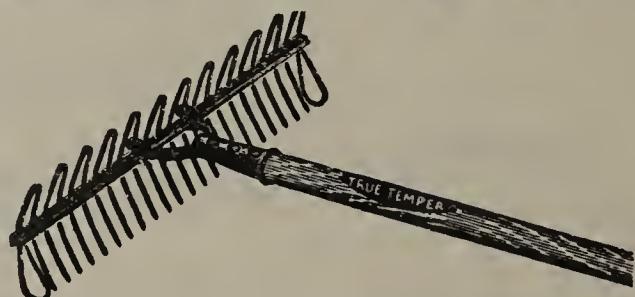
GARDEN OR FIELD HOES

7-inch	\$0.90	8-inch	.95
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STEEL GARDEN RAKES WIRE LAWN RAKES



12 Teeth, 5 1/2 ft. Handle	\$0.90
14 " " "	.95
16 " " "	1.00
18 " " "	1.15



24 Teeth—Bolted Pattern \$1.00
Brume .90

SPADING FORKS



4 Tine, Long	Handle, Strap Ferrule	. \$1.50
4 " Mal. D	" " "	. 1.50
5 " Long	" " "	. 2.00
5 " Mal. D	" " "	. 2.00

Norcross Improved Hand Garden Cultivator



3 Tooth Short Handle (8 in.)	\$0.50
3 " Long " (4 ft.)	.80
5 " " " (4 1/2 ft.)	1.00

TURF EDGERS

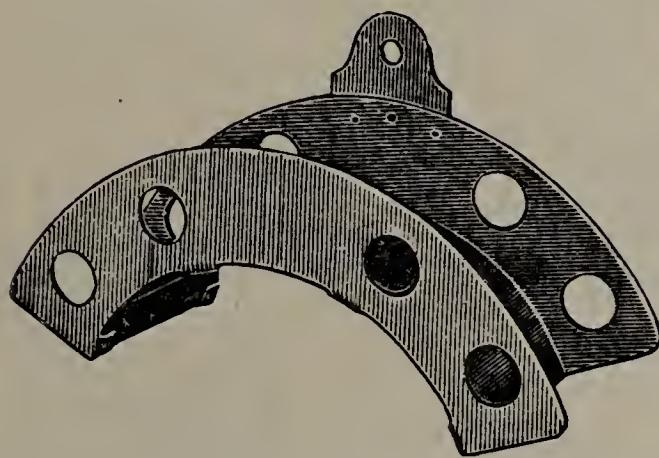


Long Handle, Shank Pattern	\$1.00
Iron D " " "	1.00

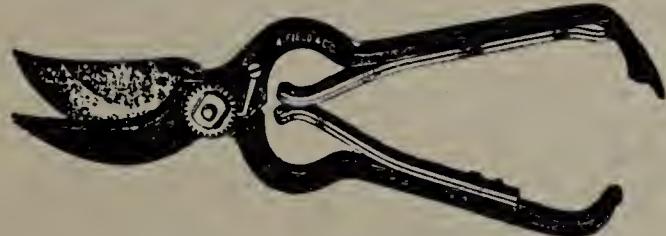
Corrugated Rubber Garden Hose

The "Hose" listed is that of high grade manufacture which we furnish coupled in 50-ft. lengths.

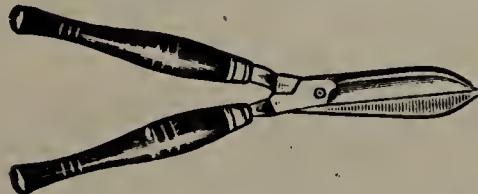
Special $\frac{5}{8}$ inch.....	\$3.00
Red Vigilant $\frac{5}{8}$ inch	5.00
Red Vigilant $\frac{3}{4}$ inch	5.50
Red Holley $\frac{3}{4}$ inch	6.00
Gray Rock Rib $\frac{3}{4}$ inch	7.00
Quaker City $\frac{3}{4}$ inch	8.00

Goldsmith Hose-Rack

The Goldsmith Hose-Rack is a hose-preserved, since the hose hangs on the rack in large, natural coils, thus preventing kinking and twisting. 90c each.

**PRUNING SHEARS**

65c, 75c \$1.00, \$1.50, \$2.00 and \$3.00



Hedge Shears—6 inch, 75c, \$1.50; 8 inch \$1.00, \$2.00; 9 inch \$1.25, \$2.25

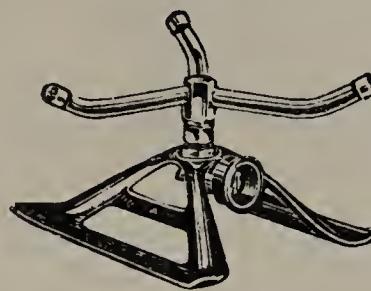
HOSE SUPPLIES

Siamese Hose Attachment.—Permits use of two leads of hose at one time. $\frac{3}{4}$ inch 85c each.

Hose Clamps or Bands.— $\frac{1}{2}$ and $\frac{3}{4}$ inch sizes, 5c each.

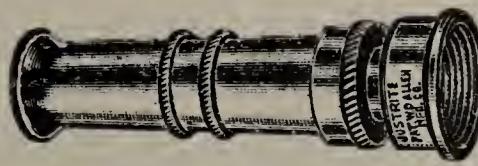
Regular Hose Couplings.—Easily applied. $\frac{1}{2}$ inch, $\frac{5}{8}$ inch, $\frac{3}{4}$ inch, 15c each; \$1.50 per dozen.

Perfect Clincher Hose Coupler.—Self-fastening Coupling that does not require extra bands. $\frac{1}{2}$ in., $\frac{5}{8}$ in., $\frac{3}{4}$ in, 10c each.

"Dollar" Lawn Sprinkler

The Dollar Lawn Sprinkler is especially designed to sell at One Dollar. This efficient lawn sprinkler is made with a view to popularize lawn sprinklers. In operation it gives a widely distributed uniform spray.

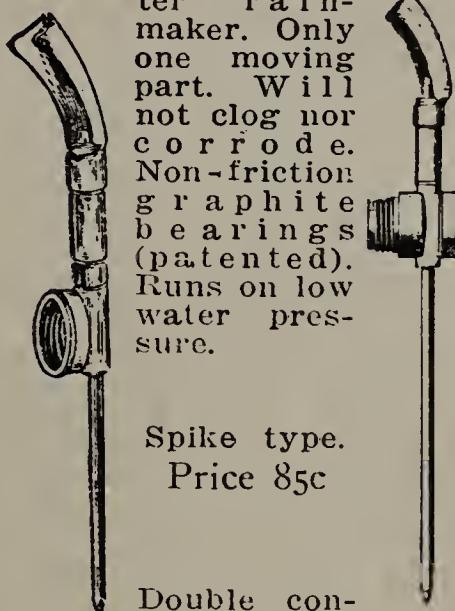
The Dollar Sprinkler stands $4\frac{3}{8}$ inches high, base $6\frac{1}{2}$ inches by $7\frac{1}{8}$ inches. Arms are $4\frac{1}{2}$ inches long. The head and arms are of brass, base is finished in Duco. Price: \$1.00.

Boston Spray Nozzle

Will throw a spray, a large or a small solid stream. Price, 50 cts.

Rip Sprinklers

The master rain-maker. Only one moving part. Will not clog nor corrode. Non-friction graphite bearings (patented). Runs on low water pressure.



Spike type.
Price 85c

Double connection type.
Price. \$1.00



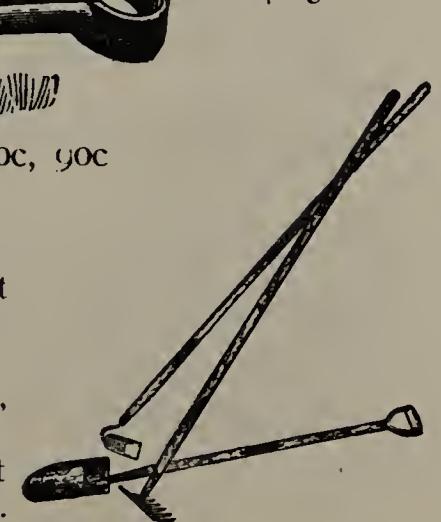
Grass Shears 60c, 90c

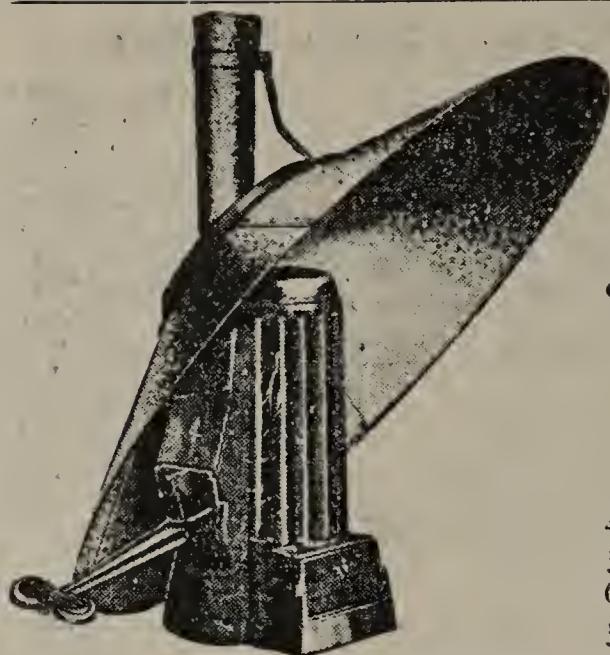
Planet, Jr. Turf Edger

Price, \$1.60.

FLORAL SETS

3 in set,
\$1.50





MAKOMB GIANT COAL BROODERS

Square base and ashpit of greater capacity.

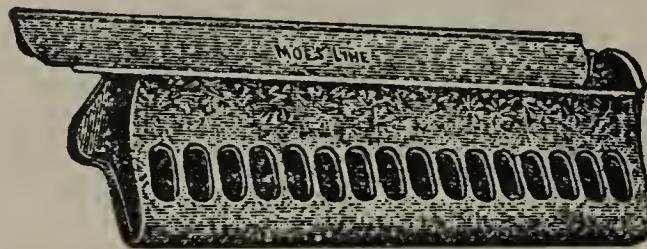
New type coal door hinge, eliminating binding or poor fit.

New Regulator Screw for easier adjustment.

Larger shaker handle, offset for convenience.

	Chick Capacity	Price Each	Net Cash Price
47 in. Giant	350	\$15.95	\$15.15
56 in. Giant	600	19.95	18.95
65 in. Giant	800	25.75	24.50
56 in. Standard	500	16.95	16.10
65 in Standard	700	18.95	18.00

Large Capacity Feeder



Wall Founts.



No. 140—Chick Feeder, each.....\$1.00
No. 140W—Same as above but with wide rain cover.... 1.20

A fine feeder for growing stock, and a great time and labor saver. Has a total of 32 feeder holes. Sliding top, easy to fill and clean. Capacity, 10 quarts; length, 21 inches.

No. 141—The same style, but larger. Length, 35 inches. Has 54 feeder holes. Capacity, 17 quarts, each.....\$1.50
No. 141W—Same as above, but with wide rain cover.... 1.75

Felker's Handy Attachment



To be used with any make of Fruit Jar
A PERFECT FEEDER

For Sour Milk, Water, Hard Grain or Grit
The Container is made of aluminum, the only metal in which sour milk can be fed with safety. It is rust-proof and non-corroding. The HANDY is adjustable, simple to operate and durable. Every one has some kind of a quart fruit jar—the HANDY fits them all. Price 25 cts.

Leader Fountain

A new Sanitary Fountain, practical to use, easy to keep clean.

A saving of from 30 to 40 per cent over any fountain its size.

1 1/2 gal. 85c
3 gal. \$1.50

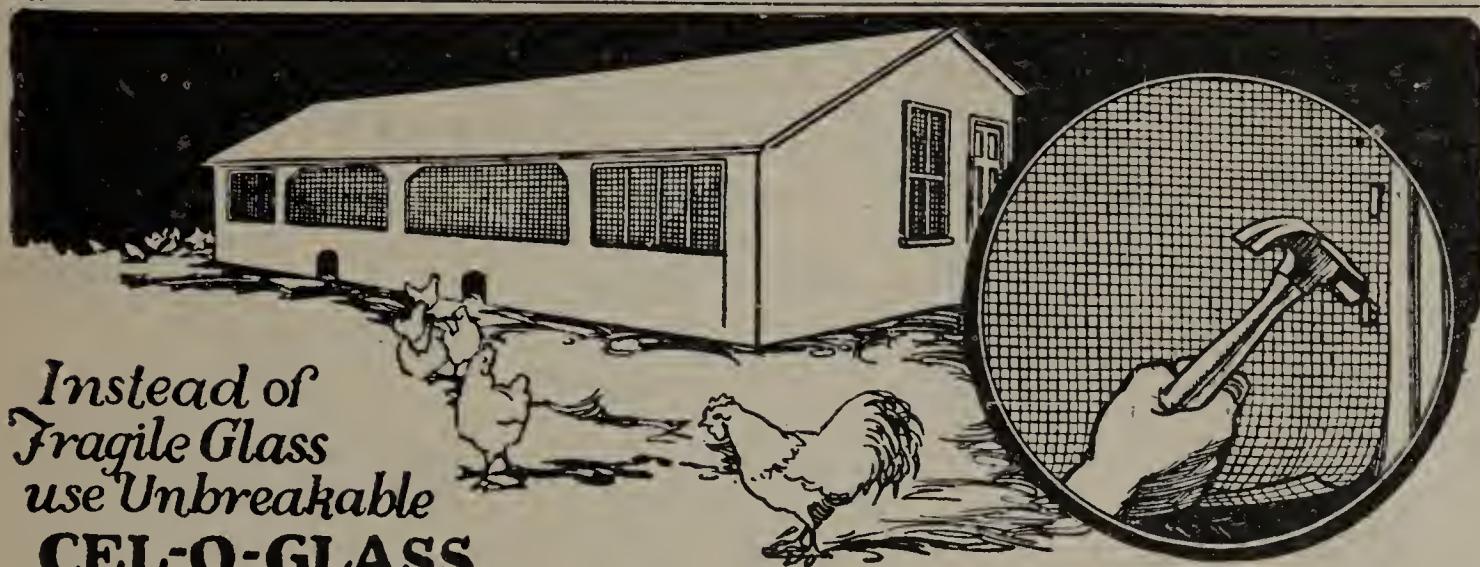


Kwik-On Leg Bands — Made of aluminum. These bands are light in weight, dependable and will not break in using. They are easy to put on and they can't lose off. Kwik-On Bands are accurately made in fast colors, weather proof and will not fade. Made in three colors—Red, Blue and Greens. Five sizes. Order by number: No. 9, Leghorn size; No. 10, Plymouth Rocks and Rhode Island Reds size; No. 11, Large Plymouth Rocks and Reds:

Prices, 10c doz. 50c per hundred



75c



*Instead of
Fragile Glass
use Unbreakable
CEL-O-GLASS*

Cel-O-Glass is an unbreakable highly translucent material made by coating tough wire mesh with a transparent substance that lets through practically as much light as clear glass. Is very light in weight, absolutely weatherproof and extremely easy and economical to use. It is flexible, comes in rolls 3 ft. wide and can be used almost any place where fragile glass is required. Price 40c linear ft.

DOPLEX

is especially recommended for

POULTRY HOUSES



Repeated tests have shown that chicks raised under ultra-violet light grow more rapidly, are stronger and healthier than when these rays are eliminated as they are by ordinary glass. Doplex means more profit for the user.

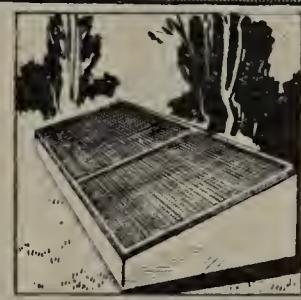
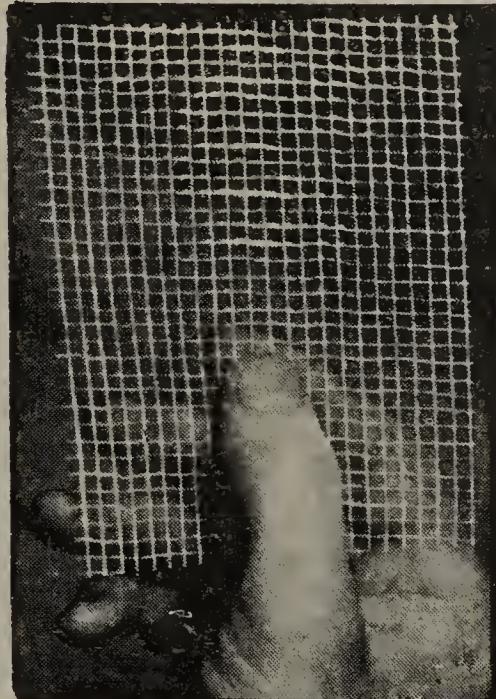
Width 36 inches. Price 50 ft. Rolls, \$12.00

Smaller Quantities. 25c linear ft.

Glass Cloth.

Glass Cloth is a strong fabric treated by a patented process to make it transparent, weather-proof and water-proof. It costs much less than glass and for many purposes is superior. Anyone can put it up. It admits abundant light, which it diffuses and scatters to all parts of the enclosure. It comes in rolls 36 inches wide and any length.

Price 40c a linear yd.



B - K

B - K is especially adapted for the prevention and treatment of poultry diseases such as Roupe, Canker, Cholera, Bacillary and White Diarrhea. B - K is also a Powerful Disinfectant.

Prices 4oz. 30c, 10 oz. 50c, Qt. 90c, Gal. \$2.00, 5 Gal. \$8.50



O. K. POULTRY LITTER

(Imported peat moss)

Per Bale \$3.00 - Delivered.

5 Bale lots \$2.75 each Delivered.

25¢ per bale less at our warehouse.

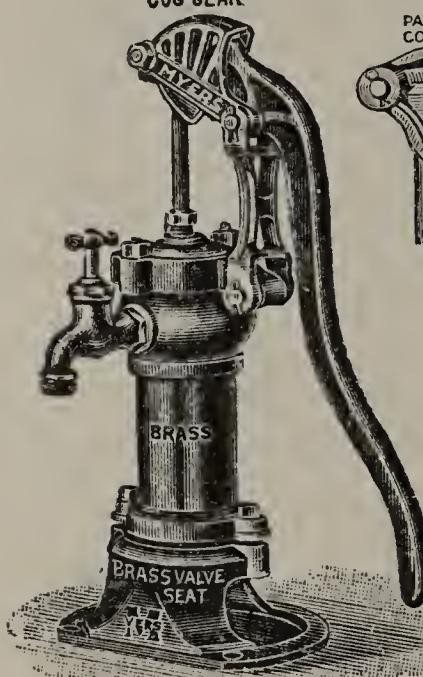


CARBOLA

Carbola — The modern disinfecting whitewash can be used as a paint or powder spray it, brush it or dust it.

Prices 5 lb. 75¢, 10 lb. \$1.25, 25 lb. \$2.85, 50 lb. \$5.00.

Fig. 2443

PATENTED
COG GEAR

The Myers Cog Gear House Force Pump.

PATENTED.

ALUMINUM AND GOLD FINISH.

33 1/3% Less Power Required to Operate.

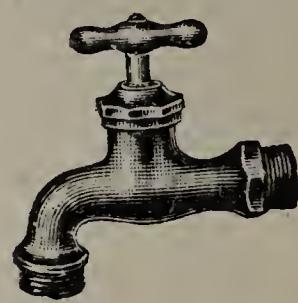


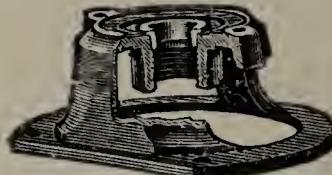
Fig. 2443 represents the Myers Single Acting House Force Pump fitted with our Patented Rolling Motion Cog Gear Handle and Seamless Drawn Brass Cylinder with Plain Brass Valve Seat and Hinged Check Valve. The head is attached to the pump by two hook bolts. The handle can be located at any angle desired. Arranged to drain the water to prevent freezing. The plunger can be withdrawn through head of pump. Tapped for back outlet. Can be used with Plain or Cock Spout. Entire height 20 inches.

PRICE LIST, Represented by Fig. 2443.

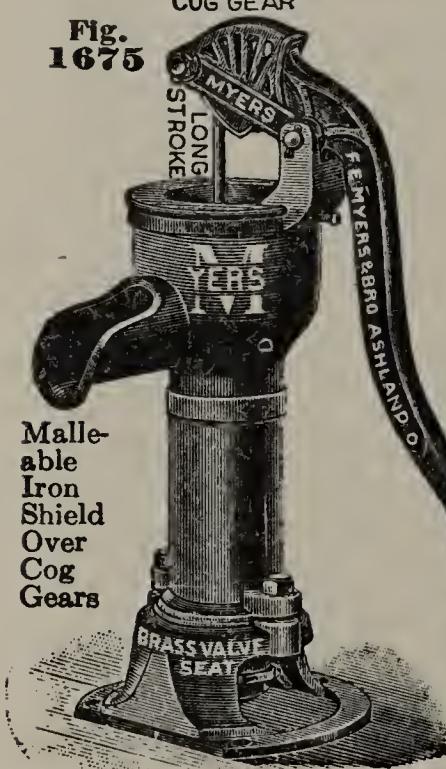
No. R414, Myers Cog Gear Single Acting House Force Pump with Plain Spout, 3 inch Brass Cylinder, with plain Brass Valve Seat, tapped for 1 1/4" pipe GIFOI \$ 6.75

No. R414CS, Same as No. R414, except with 3/4" Brass Cock Spout, GIFUZ 7.25

For Hose Connection, See Accessories.



Showing Brass Valve Seat
Used with these Pumps.

Fig.
1675PATENTED
COG GEAR

The Myers Cog Gear Pitcher Pump.

Fitted With Brass Valve Seat.

Long Stroke. Large Capacity.

More Water With 33 1/3% Less Power Required to Operate.

Fig. 1675 represents the Myers Long Stroke Pitcher Pump placed on the market by us to meet the demand for a pitcher pump with extra large capacity. This pump is fitted with our patented rolling motion cog gear handle. The handle can be adjusted to any desired angle. The cylinder is bored and highly polished. Arranged to drop the water to prevent freezing.

PRICE LIST, Represented by Fig. 1675.

No. R416, Myers Long Stroke Cog Gear Pitcher Pump, 3 inch, polished cylinder, with plain brass valve seat, tapped for 1 1/4 inch pipe GIGAN \$ 3.75

No. R417, As above, with 3 inch brass lined cylinder, tapped for 1 1/4 inch pipe GIGEF 5.25

No. R418, Myers Long Stroke Cog Gear Pitcher Pump, 3 1/2 inch polished cylinder, with plain brass valve seat, tapped for 1 1/2 inch pipe GIGIX 4.75

Fig.
1676

5" STROKE

F. MYERS & BRO. ASHLAND, O.



Myers Long Stroke Pitcher Pump.

Fitted With Brass Valve Seat.

Long Stroke (5"). Large Capacity.

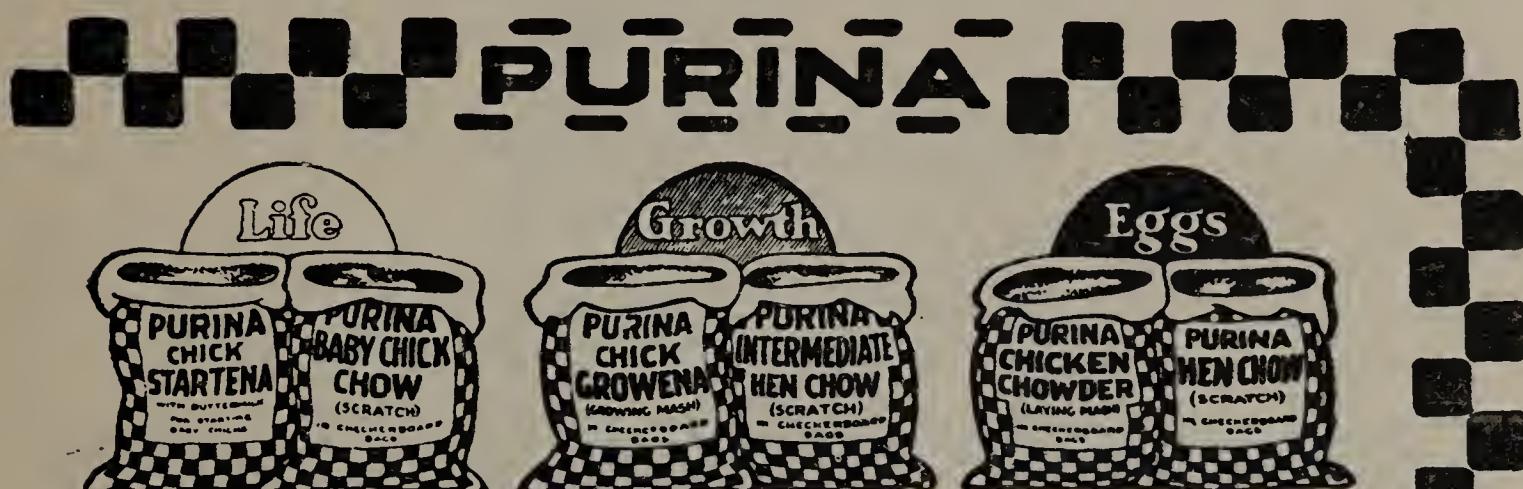
Fig. 1676 represents the Myers Long Stroke Pitcher Pump built to fill the requirements of a pitcher pump where capacity is considered. The cylinder is bored and highly polished. The handle is adjustable to any angle. Arranged to drop the water to prevent freezing.

PRICE LIST, Represented by Fig. 1676.

No. 416, Myers Long Stroke Pitcher Pump, 3 inch polished cylinder, with plain brass valve seat, tapped for 1 1/4 inch pipe GIGOK \$ 3.50

No. 417, As above, with 3 in. brass lined cylinder. GIGTA 5.00

No. 418, Myers Long Stroke Pitcher Pump, 3 1/2 inch polished cylinder, with plain brass valve seat, tapped for 1 1/2 inch pipe GIHAM 4.50



Feed a Balanced Ration for Year Round Profits
 buy **PURINA POULTRY CHOWS**
 at the Store with the Checkerboard Sign

Why O-Molene Is Best

What Goes Into O-Molene

To make O-Molene the perfectly balanced feed for horses and mules it goes thru a special process of manufacture. The grains are crushed and made more appetizing to the animal as well as more easily digested.

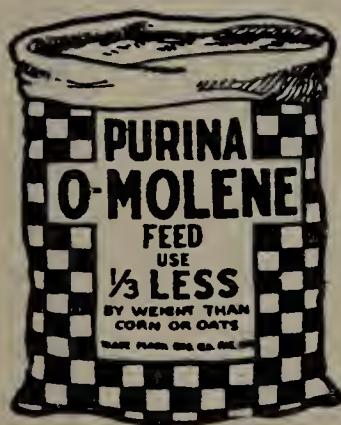
Only choice ingredients are used. Horses must have a feed that contains variety. O-Molene supplies a perfectly balanced ration.

What Is Taken Out

First only the highest grade grains are used. These are dusted and thoroughly cleaned, taking out all the chaff, dust, clipped ends and other undesirable parts. Then the grain is dried in a large kiln so that much of the moisture you pay for in ordinary grain is removed.

The result is, it takes much less O-Molene than ordinary feeds to keep a horse in perfect condition, and make him live and work longer.

Try a few bags and you'll agree that O-Molene costs less in the long run.



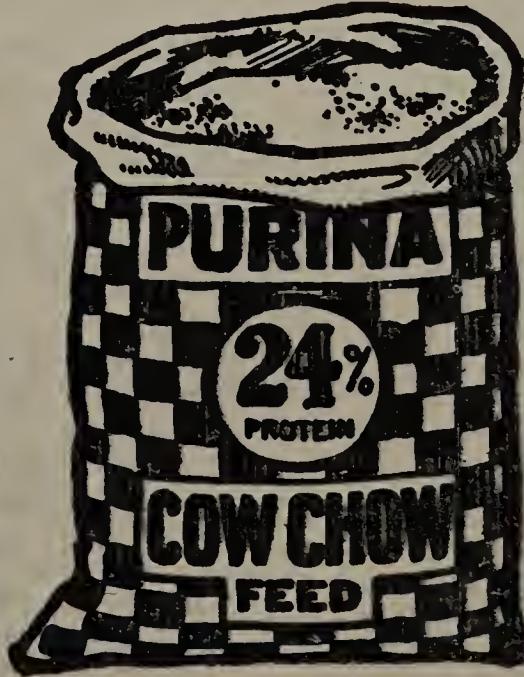
PURINA



Feed Purina Cow Chow

and your cows will get all the Protein and Calcium needed to balance your Carbohydrate roughness.

All we ask is that you give Purina Cow Chow a trial and let your milk scales show you why you should keep on feeding it.





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**slip-top cans - all sizes
easy to open - self-sealing
clean - convenient - no waste**

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**Our Policy
is to Sell the Best
in all Lines**

We have investigated thoroughly—
made comparative tests and
are convinced that

B. P. S.
Paints • Stains
Varnishes

Are the Best We Have Seen

82 Beautiful Colors to Select From

We carry a full line of Brushes, Linseed
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CAREY Ready Roofings include heavy-weight slate or mica surfaced roofings for large permanent buildings, lighter weights for small permanent buildings, and still less expensive roofings for your inexpensive buildings—sheds, corn cribs, hog houses, garages, chicken houses, and shelters.

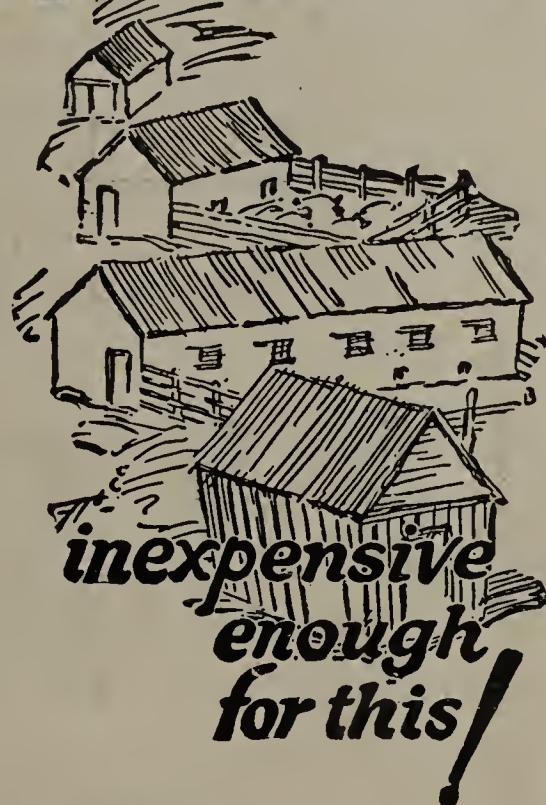
No matter what your requirements are, you will find a grade and weight of Carey Ready Roofing at the minimum price for which adequate roofing for the purpose can be had.

Giving the best value for the money and the best roofing for the purpose is our policy. We handle the Carey line because it fits that policy of service and value giving.

Let us estimate on your needs.

“A Roof for Every Building”

Carey
READY
ROOFINGS



PLANT AND TREE ENEMIES



The San Jose Scale—Winter Stage.
Enlarged 18 diameters. Courtesy
of Ohio Ex. Station.

killed if there is some poison on the apple just as the insect eats its way in, but after once getting into the fruit it is safe.

Sucking insects are those furnished with a beak or slender tube with which they pierce the plant tissue and suck out the sap. Examples of this class are San Jose scale, oyster scale, scurfy scale, aphis, plant lice, etc. These insects are safe from poisons because we cannot get any poison into their food and must be killed by a direct application of such insecticides as will kill by contact, of which the most common are the lime sulphur wash and oil emulsion. In fighting this class of insects very thorough work is required, for every individual insect must be hit by the spray.

FUNGOUS DISEASES

Fungous diseases are parasitic consisting of plants or growths of low form, which live on other living plants. Examples, apple and pear scab; black, brown and bitter rot, mildew, etc. These diseases are disseminated almost wholly by the means of spores, which are extremely small, disk-like bodies corresponding to the seed of higher plants and are usually borne on the surface. These spores are produced in great abundance and each one is capable of starting a new fungus. They are carried from one plant to another by means of wind, water and insects. For fungous diseases, then, a spray is required which will kill the spores and the important point is to commence spraying with fungicides before the disease presents itself, as spraying for fungous diseases is a preventive rather than a cure. For this purpose the combination of lime and blue vitrol, known as Bordeaux mixture, is the principal remedy. Here again thoroughness is of the utmost importance.



San Jose Scale on an Apple.

THE MEXICAN BEAN BEETLE

The Mexican Bean Beetle passes the winter in the adult stage in protected places. In the spring it leaves its winter quarters and flies to the bean fields and starts feeding on the foliage and laying eggs. In a few days the eggs hatch and the young larvae begin to feed and soon the plants are skeletonized, unless control measures are taken.

For control of Mexican Bean Beetle, it is absolutely necessary that the material used be applied to the underside of the leaves and often enough to keep the new growth covered.

Copotex applied with a Hand Blower Dust Gun, or a horse drawn duster, when the vines are dry, will control this pest.

For the home garden a Hand Blower Gun can be used throughout the season with very satisfactory results doing away with the bother of weighing out or measuring materials and having to discard any material left over. With a duster we can supply you with dust of the proper mixtures to care for fungus diseases, leaf-eating insects and sucking insects.

After dusting your plants put your duster away, leaving the material in the machine ready for your next application.

For leaf-eating insects and fungus diseases, use Copotex and for sucking insects use Niagara A-1 or P. A. Dust.

Niagara Dust and Spray Schedule
for Connecticut

APPLES

TIME OF APPLICATION	TO CONTROL	DUST OR SPRAY TO USE			
DELAYED DORMANT: The period beginning when fruit buds show silvery and ending when the leaves stick out from the fruit buds like tiny squirrel ears.	Scab Red Mite Aphis Scale Insects Leaf Roller Bud Moth	A combined spray of Emulso, 4½ gals. and Soluble Sulphur Compound, 8 lbs. and water to make 100 Gals. Dry Lime Sulphur and Lime-Sulphur are also compatible with Emulso. For the control of Bud Moth and Aphis, 1 pint Black Leaf 40 may be added to each 100 gals.			
PRE-PINK: Just before blossom buds separate.	Scab Bud Moth Case Bearer Tent Caterpillar Leaf Roller	Kolotex or Kolokil.—(Kolodust may be used if chewing insects are not present) or Koloform, 10 to 15 lbs. and Lead Arsenate 4 lbs. in 100 gals. of water or Dry Lime Sulphur, 8 lbs. and Lead Arsenate, 3 lbs. in 100 gals. of water.			
PINK: As blossom buds show pink, or about 5 to 10 days after prepink.	Scab Tent Caterpillar Curculio Bud Moth	Kolotex or Kolokil.—(Kolodust may be used if chewing insects are not present) or Koloform, 10 to 15 lbs. and Lead Arsenate, 3 lbs. in 100 gals. of water or Dry Lime Sulphur, 8 lbs. and Lead Arsenate, 3 lbs. in 100 gals. of water.			
If Aphids are a problem at this time, apply a Nicotine dust, using Niagara A-1 Dust, or if spraying add Black Leaf "40" at the rate of 1 pint to 100 gals. of water.					
FULL BLOOM:	Scab	Kolodust.—Recommended for use in wet seasons.			
CALYX OR PETAL-FALL: Immediately after petals fall.	Scab Curculio Coding Moth Lesser Apple Worm Bud Moth Green Fruit Worm Red Bug	Kolokil or Kolotex.—(Kolokil should be used where insect injury is particularly troublesome) or Koloform, 10 to 15 lbs. and Lead Arsenate, 3 lbs. in 100 gals. of water.			
Because of the danger of burning and russetting from lime sulphur sprays, it is especially recommended that Koloform be used in this and all later sprays. If red bugs are a factor, apply a nicotine dust, using A-1 dust or if spraying, add 1 pint Black Leaf "40" to 100 gals.					
FIVE TO SEVEN DAYS AFTER CALYX APPLICATION.	Scab Curculio Coding Moth Fruit Worms	Kolokil or Kolotex.—(Kolokil should be used where insect injury is particularly troublesome) or Koloform, 10 to 15 lbs. and Lead Arsenate, 3 lbs. in 100 gals. of water.			
If Curculio is troublesome in your orchard it is strongly recommended that another application of Kolokil be made about seven days later.					
JULY 1st TO 10th or first Apple Maggot Application.	Scab Coding Moth Apple Maggot	Kolokil or Kolotex or Koloform, 10 to 15 lbs. and Lead Arsenate, 3 lbs. in 100 gals. of water.			
This application should be timed to the presence of the Apple Maggot Fly.					
TWO WEEKS LATER	Scab Apple Maggot Coding Moth Leaf Skeletonizer	Kolokil or Kolotex or Koloform, 10 to 15 lbs. and Lead Arsenate, 3 lbs. in 100 gals. of water.			
AUGUST 1st	Scab Sooty Blotch Apple Maggot Leaf Skeletonizer Coding Moth	Kolokil or Kolotex or Koloform, 10 to 15 lbs. and Lead Arsenate, 3 lbs. in 100 gals. of water.			
During rainy weather or where scab control has been incomplete, additional applications of Kolodust may be desirable to prevent scab development. Such applications are valuable in preventing late infection and scab development in storage. If Leaf Hoppers are serious, A-1 Nicotine Dust should be applied.					
IMPORTANT					
This schedule is planned to give fruit complete protection, but it should be kept in mind that exceptional weather conditions necessitate additional protection. The crucial period of scab infections is from the delayed dormant through the Calyx period and the grower should keep this in mind. Scab prevention consists of protecting new growth as it develops. Foliage grows rapidly during the early part of season and consequently frequent applications are essential. Kolodust may be used wherever Lead Arsenate is not needed to control chewing insects.					
PEACHES					
TIME OF APPLICATION	TO CONTROL	DUST	SPRAY		
Late Fall or Early Spring before buds swell.	Peach Leaf Curl. (See note 1.)	Dormant Dust or Copodust, when trees are damp.	10 lbs. Soluble Sulphur or 10 to 12 lbs. Dry Lime Sulphur to 100 gal. water.		
When Blossom buds show pink.	Blossom and Twig Blight, caused by Brown Rot.	Kolodust.	Koloform 15 lbs. to 100 gal. of water. (Note 3.)		
When Shucks begin to split from small fruit.	Scab, Brown Rot and Curculio.	Kolopeach or Kolopeach Special. (Note 2.)	Peach Kolo Wet-tex 16 lbs. to 100 gal. of water.		
One week later.	Scab, Brown Rot and Curculio.	Kolopeach or Kolopeach Special.	Peach Kolo Wet-tex 16 lbs. to 100 gal. of water.		
Two weeks later	Brown Rot, Scab.	Kolodust.	Koloform 15 lbs. to 100 gal. of water.		
Three to four weeks before each variety ripens.	Brown Rot, Scab.	Kolodust.	Koloform 15 lbs. to 100 gal. of water.		

Note 1. If European Red Mite eggs are present use 4½ gal. of Emulso to 100 gal. of water plus 10 lbs. of Soluble Sulphur Compound or 10 to 12 pounds of Dry Lime Sulphur.

Note 2. Kolopeach and Kolopeach Special are standard Dust mixtures for Peaches and contain Lead Arsenate for Curculio control, as well as sulphur. Kolopeach Special differs from Kolopeach only that it contains more Lead Arsenate. Kolodust does not contain poison.

Note 3. In using Koloform and Peach Kolo Wet-tex wherever Arsenical injury is a factor, add 10 lbs. of fresh, chemically hydrated lime to every 100 gal. of dilute spray.

IMPORTANT

Applications of dusting and spraying materials containing sulphur should not be made just prior to or during periods of excessively high summer temperature.



800 Bushels Onions per acre grown on O. & W. Market Garden Fertilizer by
P. W. and J. Mullins, Hatfield, Mass.



Broadleaf Tobacco grown on O. & W. Fertilizer by Dezolt Bros.
Suffield, Conn.

SEED AND PLANT TABLES.

	Quantity Per Acre	Weight Per Bu.
Barley .	95 to 120 lbs.	48 lbs.
Blue Grass (Canada) .	25 to 40 lbs.	14 lbs.
" (Kentucky) .	25 to 40 lbs.	14 lbs.
Buckwheat .	50 to 60 lbs.	48 lbs.
Clover-Alfalfa (Broadcast)	20 to 30 lbs.	60 lbs.
" (Drills) .	15 to 20 lbs.	60 lbs.
" Crimson .	10 to 20 lbs.	60 lbs.
" Red .	10 to 15 lbs.	60 lbs.
" White. .	5 to 10 lbs.	60 lbs.
Corn (Hills) .	15 to 20 lbs.	56 lbs.
" (drills for fodder) .	60 to 75 lbs.	56 lbs.
" (broadcast) .	120 to 150 lbs.	56 lbs.
Cow Peas in Drills .	60 to 90 lbs.	60 lbs.
Millet (Common) .	25 to 40 lbs.	48 lbs.
" (Hungarian) .	25 to 40 lbs.	48 lbs.
" (Japanese) .	12 to 20 lbs.	32 lbs.
Oats .	60 to 90 lbs.	32 lbs.
Orchard Grass .	25 to 40 lbs.	14 lbs.
Rape (broadcast) .	5 to 6 lbs.	60 lbs.
" (drills) .	3 to 4 lbs.	60 lbs.
Red Top (unhulled) .	25 to 40 lbs.	14 lbs.
" (recleaned) .	10 to 15 lbs.	35 lbs.
Rhode Island Bent Grass .	25 to 40 lbs.	14 lbs.
Rye Grass (Italian) .	40 to 50 lbs.	18 lbs.
Soja Beans (broadcast) .	50 to 75 lbs.	60 lbs.
" (in rows) .	20 to 30 lbs.	60 lbs.
Sudan Grass .	15 to 20 lbs.	
Timothy .	15 to 30 lbs.	45 lbs.
Vetch (Spring) .	50 to 70 lbs.	60 lbs.
Vetch (Winter) .	30 to 60 lbs.	60 lbs.
Wheat .	90 to 120 lbs.	60 lbs.
Potatoes. .	12 Bu.	60 lbs.
Clover, .		8 pounds
Timothy, .		1/4 bushel
Red Top, .		3 pounds
Peas in drills are sown 1 1/4 to 1 1/2 bushels to the acre.		
Carrots, .	usually sown to the acre, 2 1/2 to 3 lbs.	
Beets, .	" " " " " 4 to 6 lbs.	
Parsnips, .	" " " " " 3 to 6 lbs.	
Onions, .	" " " " " 4 to 6 lbs.	
Ruta Bagas, .	" " " " " 1 lb.	
Turnips, .	" " " " " 1 to 1 1/2 lbs.	
Beans, .	" " " " " 1 1/2 to 2 bu.	

Quantity of Corn Required to Plant an Acre, Five Grains in a Hill.

3 ft. x 2	18 qts.	3 ft. x 3	14 qts.
3 1/2 ft. x 3	10 qts.	3 3/4 ft. x 3	8 qts.
3 ft. x 4	7 qts.	4 ft. x 4	6 qts.

Number of Plants per Acre at Given Distances.

1 ft. x 1 ft.	43,560	9 ft. x 9 ft.	537
1 1/2 ft. x 1 1/2 ft.	19,360	12 ft. x 12 ft.	362
2 ft. x 2 ft.	10,890	15 ft. x 15 ft.	163
2 1/2 ft. x 2 1/2 ft.	6,969	18 ft. x 18 ft.	134
3 ft. x 3 ft.	4,840	20 ft. x 20 ft.	100
4 ft. x 4 ft.	2,722	25 ft. x 25 ft.	73
5 ft. x 5 ft.	1,742	30 ft. x 30 ft.	47
6 ft. x 6 ft.	1,210	40 ft. x 40 ft.	20

Quantity of Seed Required for a Given Number of Plants, or Number of Hills, or Length of Drill.

Asparagus, .	1 oz. to 65 ft. of drill	Musk Melon, .	1 oz. to 60 hills
Beets, .	1 oz. to 50 ft. of drill	Okra, .	1 oz. to 40 ft. of drill
Beans, Dwarf, .	1 qt. to 100 ft. of drill	Onion, .	1 oz. to 100 ft. of drill
Beans, Pole, .	1 pt. to 150 hills	Onion Sets, small,	1 qt. to 4 ft. of drill
Carrot, .	1 oz. to 150 ft. of drill	Parsley, .	1 oz. to 150 ft. of drill
Cabbage, .	1 oz. to 3,000 plants	Parsnip, .	1 oz. to 200 ft. of drill
Cauliflower, .	1 oz. to 3,000 plants	Peas, .	1 qt. to 100 ft. of drill
Celery, .	1 oz. to 4,000 plants	Pumpkin, .	1 oz. to 40 hills
Cucumbers, .	1 oz. to 50 hills	Pepper, .	1 oz. to 2,000 plants
Corn, .	1 qt. to 400 hills	Radish, .	1 oz. to 100 ft. of drill
Dandelion, .	1 oz. to 200 ft. of drill	Salsify, .	1 oz. to 70 ft. of drill
Endive, .	1 oz. to 150 ft. of drill	Spinach, .	1 oz. to 100 ft. of drill
Egg Plant, .	1 oz. to 2,000 plants	Squash, early, .	1 oz. to 50 hills
Lettuce, .	1 oz. to 4,000 plants	Squash, marrow, .	1 oz. to 16 hills
Leek, .	1 oz. to 100 ft. of drill	Tomato, .	1 oz. to 3,000 plants
Watermelon, .	1 oz. to 80 hills	Turnip, .	1 oz. to 150 ft. of drill

One Gallon, by the U. S. Standard Unit of Liquid Measure contains 231 cubic inches.

The U. S. Bushel contains 2,150.42 cubic inches.

An Acre contains 43,560 square feet.

USEFUL CHEMICAL MEMORANDA

(Partly from the first annual report of the Connecticut Agricultural Experiment Station, 1876.)

Animal and vegetable substances, such as flesh, bone, wood, grain, manure, and the like, contain three classes of materials: Water, Organic Matters and Mineral Matter or Ash. If we heat a piece of wood, a whisp of hay, a bone, or a portion of manure or soil, in an oven, the water will be dried out. If we put the dried material in the fire, the *Organic Matter*, which consists mostly of the chemical elements, carbon, oxygen, hydrogen, and nitrogen will be burned away, and there will remain the *Mineral Matter or Ash*. The ash of these different materials generally contains more or less potash, soda, lime, magnesia, iron, alumina, silica, phosphoric acid, sulphuric acid, chlorine, or other ingredients. The proportions of these vary widely in different substances, from the large quantities to the merest traces.

Moisture.—All fertilizers contain more or less water, which, of course has no commercial value, and serves to make them heavier and relatively poorer in valuable ingredients. In the analysis that which is removed by heating to 212° Fahrenheit (or in some cases to a somewhat higher temperature), is designated as moisture. By subjecting the dried material to a higher temperature, the organic and volatile matters are driven off, and the ash remains. By treating this ash with strong acids, all that is of any value is dissolved.

Sand and Insoluble Matters.—The residue, which resists the action of both fire and strong acids, consists of silica and other mineral matters. These possess no fertilizing value, and are classified as sand, etc.

Nitrogen, Ammonia.—In our ordinary fertilizers, much or all of the nitrogen exists in unavailable forms. By more or less rapid alterations, by decay or otherwise which take place in the soil, these are changed to other compounds, which the plant can readily use as food. Of these latter nitric acid, which contains nitrogen combined with oxygen, is one; ammonia which consists of nitrogen and hydrogen and is represented by the chemical formula N. H. is another. 14 parts by weight of nitrogen unite with 3 parts of hydrogen to form 17 parts of ammonia. Accordingly 14 parts of nitrogen are said to be equivalent to 17 of ammonia, or what is the same thing 100 parts of nitrogen are reckoned as equivalent to 121 parts of ammonia. In pure sulphate of ammonia, all the nitrogen is in the form of ammonia. In Peruvian guano, some of the nitrogen exists as ammonia also. In our ordinary fertilizers there is little or no ammonia. The very common practice of reckoning nitrogen as ammonia in fertilizers which do not contain it in this form is incorrect, misleading and therefore wrong, and ought to be abolished. Ammonia combined with sulphuric acid, forms sulphate of ammonia; nitric acid combined with soda, forms nitrate of soda.

Phosphoric Acid: SOLUBLE, REVERTED AND INSOLUBLE.—By phosphoric acid is understood the compound of phosphorous and oxygen, which is represented by the chemical formula, P_2O_5 . This combined with lime, forms phosphate of lime. The phosphate of lime which occurs in bone, and in South Carolina and other fossil and mineral phosphates, contains three parts of lime to one of phosphoric acid. This is often called bone phosphate, and is insoluble in water. When the bone phosphate is treated with sulphuric acid, the latter takes part of the lime to itself, forming sulphate of lime, and leaves the phosphoric acid in the form of a *Superphosphate*. This last is soluble in water, and when used as a fertilizer can be taken up by the plant at once, while the bone phosphate is slowly available as plant food. Phosphoric acid which has been rendered soluble, often enters into other forms of combination with lime, alumina, etc., which, though insoluble in water, are soluble in citrate of ammonia. The terms, reverted, reduced and precipitated, are applied to it when in this form.

The reverted phosphoric acid ranks in solubility, and consequently in values between the soluble and insoluble. The soluble and reverted are sometime, classed together as *Available* phosphoric acid.

In some analyses the percentage of phosphoric acid is not stated separately, that of "bone phosphate of lime" being given in its stead. Sometimes the expression "soluble bone phosphate of lime" is met with, which is certainly a misnomer. 142 parts by weight of phosphoric acid P_2O_5 unite with about 168 parts of lime CaO to form 310 parts of bone phosphate $Ca_3(PO_4)_2$; 100 parts or pounds of phosphoric acid are said, therefore, to be equivalent to 218 parts of bone phosphate. Special stress is laid on this point, because those not familiar with chemistry are apt to be deceived in comparing analyses, in some of which the term phosphoric acid, and in others the term bone phosphate, is used. It would be more accurate and clear, and in every way better to discard the term bone phosphate of lime in analyses of fertilizers, and speak only of phosphoric acid.

Potash, or potassa, is the compound of the metal potassium with oxygen, which is represented by the chemical formula K_2O or KO . This combined with sulphuric acid forms sulphate of potash. Potassium and chlorine together form chloride of potassium, or "muriate of potash," as it is called by dealers.

100 pounds of pure sulphate of potash contains about 54 pounds of "actual potash." 100 pounds of sulphate of potash are therefore said to be equivalent to 54 pounds of actual potash, and vice versa, 54 pounds of potash, in the sulphates are reckoned as equivalent to 100 pounds of sulphate of potash. In the "muriates" 100 pounds of chloride of potassium are reckoned equivalent to about 63 pounds of potash, and vice versa.

Carbonate of Potash, K_2CO_3 — This fertilizer chemical is the ingredient which gives to wood ashes and cotton hull ashes their value as tobacco fertilizers, and it is practically free from magnesia. It was formerly prepared by extraction from wood ashes, and formed the "pearl ash" of commerce. It has been used with good effect as a tobacco fertilizer in the Poquonock experiments.

The following figures will be found useful in calculations of the composition of fertilizers.

NITROGEN COMPOUNDS

14. parts of Nitrogen	are contained in	17. parts of Ammonia.	
100. "	"	121.43	"
82.35	"	100.	"
17.	" Ammonia	66.	" Sulphate of Ammonia.
100.	"	388.2	"
25.8	"	100.	"
14.	" Nitrogen	66.	"
100.	"	471.4	"
21.2	"	100.	"
14.	"	54.	" Nitric Acid.
100.	"	385.7	"
25.9	"	100.	"
14.	"	85.	" Nitrate Soda.
100.	"	607.1	"
16.47	"	100.	"
54.	" Nitric Acid	85.	"
100.	"	157.4	"
63.5	"	100.	"
85.	" Nitrate of Soda correspond to	17.	" Ammonia.
100.	"	20.	"
500.	"	100.	"

PHOSPHORIC ACID

100. parts of Phosphoric Acid	correspond to	218.3 parts of Bone Phosphate.
45.8 "	"	100. "

POTASH (Potassa)

100. parts of Sulphate of Potash	contains	54.08 parts of Potassa.
184.9 "	"	100. "

100. "	Chloride of Potassium	correspond to	63.17 parts of Potassa.
158.3 "	"	"	100. "

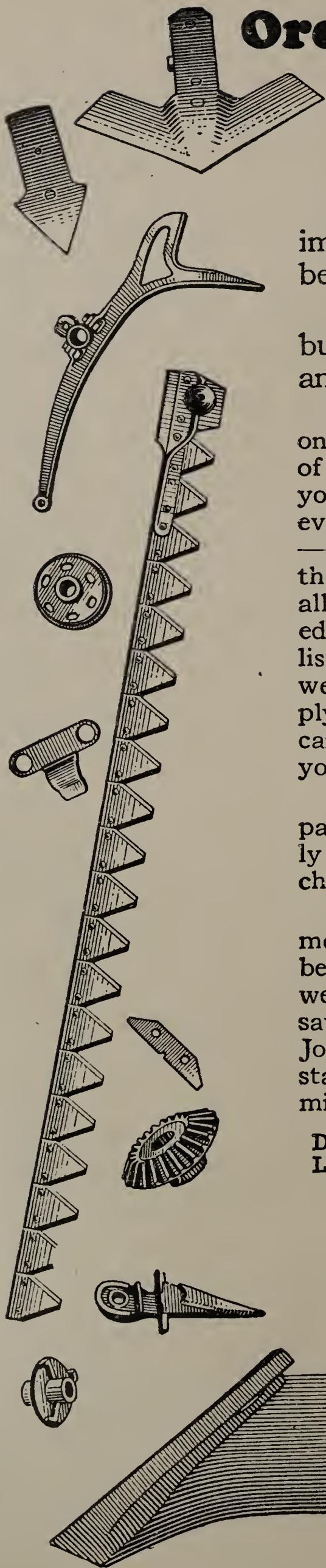
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Order Your Repairs Before the Rush Comes



Don't get caught this spring with implements that cannot be operated because of a few needed repairs.

A delay of a day or two in your busy season may result in big dollars-and-cents loss.

Here's a way to prevent delays later on. Right now, when you have plenty of time, take a complete inventory of your implement equipment. Go over every machine you plan to use this year—see if new boxes are not needed—if the plow shares are in usable shape—if all parts are whole. Jot down the needed parts on each machine, give us the list so that we can order such parts that we may not have in stock. We will supply the new parts to you quickly, so you can get your machines in ship-shape for your field work.

Don't forget, too, that genuine repair parts last longer, fit better and materially prolong the usefulness of your machinery.

While you are going over your equipment, you may find machinery that is beyond profitable repair. Remember, we have a full line of John Deere labor-saving, crop-producing implements. John Deere machinery, built to a high standard of quality, is the most economical in the long run.

**Don't forget to order your repairs early.
Last-minute ordering is usually costly.**

